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REPORT

OF

DEPUTATION ON EDUCATIONAL ENQUIRIES

IN GREAT BRITAIN

DURING 1902-1903

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BY

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REPORT OF DEPUTATION ON EDUCATIONAL ENQUIRIES IN GREAT BRITAIN DURING 1902-1903.

The subjects appointed for enquiry were the following :—

A.—Inspection.	C.—Kindergarten.
B.—The Training of Teachers.	D.—Object Lessons.

A.—Inspection.

Up to the date of the compilation of this report the normal hierarchy of the British official inspectorate has been composed as follows :—

British Inspecting Agencies.

a. Departmental.

1. H. M. Chief Inspectors of Schools. 2. H. M. Inspectors of Schools. 3. Junior Inspectors. 4. Sub-Inspectors.

Inspectresses have also been appointed (ranking with Juniors) for work in girls' schools and special inspectresses exist for such subjects as needle and laundry work and cookery. Special sub-inspectors are also employed for manual training and drawing. For music there is a special Inspector with an assistant. In the secondary branch a few 'occasional' inspectors are also employed in England for art work. Such occasional inspectors have special qualifications. In Scotland there are 3 special 'science and art' inspectors.

b. Non-departmental.

In addition to the above, who belong to the ranks of the British Civil Service,* a large number of local inspectors are employed by various local authorities. This number will be increased under the English Education Act of 1902. Besides inspectors, officers designated 'organizing educational secretaries' are employed by county councils and county boroughs, corresponding somewhat to the 'educational superintendents' of America.

Inspections of English secondary schools are also held under the authority of the Oxford and Cambridge Schools Examination Board, 103 boys' schools being so inspected in the year ending 31st October 1901, and a certain number of girls' schools.

Constitution of the Departmental Inspectorate.

'Chief Inspectors.'

The relative position of the various departmental officers towards each other has been much the same in England as in Scotland, the chief inspector being not the administrative superior of the inspectors but rather *primus inter pares*. He is looked to for advice and guidance and may be appealed to in cases of dispute between Inspectors and managing bodies. He may also be commissioned by the Central Authority at Whitehall to hold special enquiries in any part of his division, over which he exercises rather general supervision than direct control. A division is usually of considerable extent (*e.g.*, Wales, or the North or South, or West of Scotland). Hitherto, 'a chief' has also been directly responsible for a particular district within his own division, in regard to which district he performs all the functions of an ordinary inspector. Sir William Anson, however, has recently indicated in Parliament that a change will be made in England in these respects and that a supreme chief inspector (corresponding apparently to the Director of Public Instruction in Bombay) will be appointed, with 'divisional inspectors' under him, who will exercise more direct authority over the district inspectors, and the lower grades. It is possible that Scotland may follow suit but no official pronouncement has been made.

Changes to take place in upper ranks of English Inspectorate.

Inspectors.

An inspector is in charge of a district (urban or rural) and generally has attached to him 2 or 3 'juniors' and a certain number of sub-inspectors. His duties consist mainly in inspecting schools and examining individuals for various tests, and will be more fully discussed later.

Junior Inspectors.

The junior inspectors are those from whom vacancies in the higher grades are usually, if not exclusively, filled. They are generally young men who have

* Excepting the 'occasional' men.

gained high honours at their Universities (some are Fellows of Oxford or Cambridge Colleges) and are appointed without examination. An increasing number of them passes through some preliminary training in the science and art of education, though this has not yet been officially declared to be an essential qualification. As 'juniors' they are not in charge of districts but are attached to full Inspectors to learn their work and to act as assistants, in which position they may spend 2 or 3 years. It would be a great advantage to inspecting work in the Presidency if a similar system could be adopted in our own Department.

Sub-Inspectors.

Sub-Inspectors assist the inspectors and coach 'the juniors' in the practical details of their new profession. No provision being made for a clerical staff in the service of an inspector, sub-inspectors are also often called upon to perform clerical duties, for which the inspector has no time. The majority of them have passed either as scholars or teachers (or both) through all the grades of the primary system and they are therefore peculiarly well qualified for dealing with elementary schools and lower school work generally. It is rare for such men in England to be promoted to the full inspectorate since their University qualifications and general training and education are not as a rule considered adequate for the position. Speaking generally, in fact, one may say that neither in Scotland nor in England is it conceded that the route to the higher posts can lie only through the lower, or that prolonged experience in teaching is the chief or only requisite for an inspectorship.

Comparison of constitution of Bombay and British Inspectorates.

At first sight a certain resemblance would appear to obtain between the grades of the British and Bombay inspectorates. Thus our Inspector of a Division should correspond to a 'senior inspector,' a British inspector to our Deputy Inspector, and a sub-inspector to a Bombay assistant deputy. Yet even so no place can be found for the British 'junior' in our system as at present constituted. Moreover the resemblance in other points is superficial. British Inspectors have (hitherto at least) had practically no direct administrative functions, while their scope for personal initiative is also distinctly less than that of their Bombay colleagues.

Duties and powers of a British Inspector.

In Great Britain an inspector's duties, as has been said, are confined largely to examination and inspection work, in accordance with the regulations of the Codes. Of his own authority he can enforce comparatively little and of course he has no direct powers of control over the personnel of the schools he inspects, still less any immediate punitive powers. Breaches of the Code, general inefficiency, omissions and failures on the part of managers are reported to the Central Authority in London and dealt with by it.

Powers of H. M. I.

Indirectly, however, the inspector has very considerable influence, often more in virtue of his personal than his official powers. He may be consulted upon the pay and appointment of teachers, the creation of 'centres' for special subjects, the erection and distribution of new schools, by both 'Whitehall' and the various local educational bodies with which he comes in contact. His definite recommendations in matters of educational organization or in reference to buildings, courses, grouping of scholars and other details are generally respectfully considered and, when possible, executed by the managers concerned. In rural districts his practical powers may be more distinctly effective than in urban districts and his opportunities for more direct personal control greater.

Future Developments in Inspection.

The tendency, however, of the 'new inspection' and the effect of the recent Education Act will probably combine to restrict the Departmental Inspector's powers of initiative in and direct regulation of such matters as school curricula, schemes of educational organization, etc., still further, though in all such cases the Central Authority is reserving to itself an ultimate right of veto. In fact, in view of the great developments in all directions that are to be expected in England under the new Act, it seems not improbable that the functions of H. M. I. will in future be limited to the inspection of educational machinery run by others than himself, and to the registering of results and opinions for the benefit of 'My Lords.' The words of the last report* of the Scotch Committee of Council for education distinctly point to this consummation. It is declared

* *I.e.*, for 1901-1902.

that "inspection should not regulate teaching but *vice versa*, though it will still be the duty of the Inspector to animadvert upon deficiencies in the curriculum." In our own Presidency where teachers have no one to look to for guidance but the Inspector, and where many of them are directly under his control such negative methods would not appear desirable.

Inspectors' Reports.

An important part of an inspector's work is the filling in and despatch of inspection reports to the Central Authority. These consist of printed forms furnished by the Department, the printed portion consisting of succinct questions to which equally brief written answers are required from the Inspector. Hence, although the points to be noted are somewhat numerous, conciseness in the report as a whole is obtained and much clerical labour is thus avoided. There is a danger of course that such reports might become stereotyped and formal and that the very briefness of the replies might in itself tend to vagueness and obscure the true state of the case by omitting or curtailing the general context. This is, however, to some extent provided against by the addition of a blank page on which H. M. I. may note general opinions or special details not provided for in the body of the report. The form of the report varies in accordance with the nature and object of the visit. Thus there are special forms for visits without notice, for interim visits, and for cases where overt breaches of the Code have to be reported. When completed by H. M. I., the report goes in to the Central Authority and is there dealt with by an 'Examiner,' who, after minuting upon it such orders as are necessary, forwards it to the managers concerned.

Curtailment of Correspondence and Report work.

The general tendency is to curtail report making and correspondence and to substitute personal interviews, as far as possible, for the latter. In Great Britain with its comparatively short distances and ample means of communication this is a far simpler matter than in India, where personal relations are often out of the question. Two special instances of the curtailment of report work in England are worthy of separate mention:—(1) H. M. I. is not required to compile a general annual report for his district. (2) Detailed annual reports as a previous condition for the grant are not required upon efficient schools, where no special change has taken place in the staff, curriculum, or general conditions during the past year. (English Provisional Code for Elementary Schools for 1903, p. ii, sec. 2.)

Methods of Inspection.

As regards methods of inspection a broad difference existing between the Scottish practice and that of England has to be noted. In England the tendency is towards specialization and this results in a triple division of inspecting and administrative agencies into (1) Primary, (2) Secondary, (3) Technological.* Each of these (though ultimately all come under one supreme head) is kept quite distinct from the other and each employs a separate set of inspecting officials. In Scotland there is no such system of 'water-tight compartments' and the same inspectors are employed both for primary and secondary inspection. This report is not concerned with Technological Education which may therefore be passed over with the remark that *primâ facie* it requires a specially organized inspectorate in a far more marked degree than do the other branches of education.

The question of specialization in Inspection.

With the latter the case is different, and very much depends upon local educational conditions. In England a hard and fast differentiation has long existed between all kinds of primary and secondary education, based to some extent upon a belief in an essential distinction existing between them. The population is moreover large and its component classes are at very various stages of educational progress.

Conditions in England and Scotland contrasted as regards specialization of inspection.

There is too a very distinct gap between certain older forms of secondary education and the more modern elementary system. In Scotland on the other

* (A reaction is however beginning in England. According to Sir J. Gorst, Junior Inspectors are henceforth to be under the Board of Education generally, and as such, will inspect any school it may direct, primary, secondary or technical. In practice, however, the general procedure has not yet been appreciably modified except in H. E. Schools, etc., where "Secondary" men take the higher subjects while a primary inspector takes the lower, and in a few instances which are regarded as tentative: as for example at Bolton where the Inspector (a new man) as an experiment is to inspect certain secondary institutions.)

hand the area and population are far smaller, and not only is the general average of ordinary education somewhat higher than in England, but it is also vastly more homogeneous, while there is no such breach in continuity between the Secondary and Primary systems as there is South of the Tweed. The result is that in practice among Scottish teachers and in Scottish methods the distinction between Secondary and Primary has nothing like the same rigidity, nor does it carry with it the same connotations that it has in England. Hence while particular English conditions may render a specialized inspectorate desirable it does not follow that such an institution is of absolute value. In other conditions specialization may be disadvantageous, or it may be attainable on different lines, *e. g.*, by the special appointment of experts for the examination of special subjects (*e. g.*, science, higher mathematics, certain languages) for which purpose extra-departmental assistance may (as in Scotland) be invited with advantage both to the Department and the schools concerned.

Results of non-specialization in Scotch inspectorate.

One result of the combination of functions in Scotland is that Scotch inspectors are enabled to become members of both Secondary and Primary bodies concerned with educational organization. In this way they obtain powers of control and initiative that are denied to their English colleagues. Moreover they are thus kept in closer touch with all the chief phases of the national system and are able to apply knowledge gleaned in one department to the improvement of work in another.

General dangers of specialization in inspectorate.

In any case, to limit an inspector to the inspection of one class of school solely is to narrow his educational outlook, to obscure his comprehension of the true relation of the parts of the system to each other and to the whole, and to render him liable to magnify his one department at the expense of the rest.

Specialization on English lines not desirable in Bombay.

The system of inspection in the Bombay Presidency coincides at present more closely with that of Scotland than with the English and probably rightly so. In spite of its large area, the population of the Presidency is comparatively small. Education moreover with us is far more continuous and homogeneous than in England and in its general features more nearly resembles that of Scotland. The "water-tight compartment system" of inspection would therefore prove in all probability not merely undesirable but injurious, especially where, as in Bombay, inspectors and deputy inspectors possess considerable administrative powers of a general kind.

Visits of Inspection.

As regards detail, inspection in Great Britain does not now differ greatly from its counterpart in Bombay. In England however *each school has to be visited twice in the year* and interim and surprise visits may be paid in addition, H. M. I. having the right to visit any recognized school with or without notice.* It is not of course required that he should *in person* visit each of his schools twice a year. To do so would often be impossible. The usual practice is for H. M. I. to distribute the schools between himself and his 'juniors' and 'subs' taking care to see as many himself during the year as possible, but regulating his visits according to the conditions of particular schools. The general points which H. M. I. is instructed to take notice of are set out in the Codes. (English Code, 1902, sec. 84 sqq., sec. 101 and sec. 110, Scotch Code, 1903, sec. 19, especially pp. 3 to 7.) Information as to details of investigation may be gathered from the specimen report forms forwarded with this report.

School Registers and Records.

Special attention may be directed to the instructions regarding school registers, etc., and their inspection by H. M. I. (Scotch Code, 1903, sec. 34 sqq., and English Provisional Code, 1903, Schedule VII.) Emphasis is placed therein upon the necessity of a 'log-book' for all schools and of the submission in due time of all schemes of work and time-tables to the inspector for approval. In particular in Scotland insistance is laid upon the keeping of *class* records of work for each subject, upon which any examination which the Inspector makes is to be based. (Scotch Code, 1903, p. 7, sec. 19, clause 11.)

The 'new inspection.'

Formal, detailed examinations are no longer required. In England, however, the inspector is empowered, "if he considers that circumstances require it", after due notice to hold a formal examination either of the whole or a

* English Provisional Code for 1903, p. ii, sec. 2.

part of the school. (English Provisional Code, 1903, p. ii, sec. 2.) In the case of secondary Scotch Schools H. M. I. is directed to give notice, in ordinary circumstances, of intended inspection but is not required "to hold a detailed written examination every year." (Report on Secondary Education in Scotland, 1902, p. 92.) Due consideration, however, is to be given to the wishes of managers in this matter. In Scottish primary schools even the 'Merit Certificate' no longer depends upon a special examination held by H. M. I. It is now granted "upon leaving school to any scholar who, after enrolment in a supplementary course of study, with the approval of the inspector, has followed that course for not less than a year, is certified by the head teacher to be of good conduct and character and is shown to the satisfaction of the inspector to have made good progress in the studies of that course." (Scotch Code, 1903, p. 15, sec. 29.)

'Grouping' instead of standards.

Neither in England nor in Scotland is the old rigid classification of scholars by 'annual standards' maintained. A system of 'grouping' according to subjects is taking its place and masters are allowed to promote children in various subjects according to their proficiency in them (*cf.* Scotch Code, 1903, sec. 19, p. 5). This system is very convenient for schools which are understaffed, but obviously calls for careful checking on the part of the inspector who is empowered to reverse promotions unduly made.

Examination *versus* Inspection.

Expert opinion, upon the whole, in Great Britain is distinctly in favour of the new inspection as against the old examination system. It is felt, however, that it would be unwise to abolish examinations altogether, hence the discretionary power conceded to the inspector in the case of each school. Certain subjects, in particular, (*e.g.* arithmetic and spelling) both in Primary and Secondary Schools appear to require the application of definite individual tests at regular and not too distant intervals, and it is not always safe to argue from general data as to method to the particular efficiency of individual pupils.

Where, as in Bombay, frequent changes occur in the inspectorate, it would seem peculiarly unsafe to trust entirely to mere inspection. On the whole, examinations, if properly conducted, are more likely in such cases to secure results of objective value than visits of inspection, which furnish a number of *impressions* necessarily more or less of a subjective character. The absolute value, of course, of such impressions depends upon the experience, skill and tact of the inspector, and his power of equating his personal estimate with actual facts and conditions. Not that inspection is to be considered as inferior to examination. In the view of the writer *both* are necessary and the employment of one or the other must depend on particular circumstances. In the case of efficient schools formal examinations at frequent intervals are not required since sufficient tests can be applied during visits of inspection. In backward or inefficient schools both examination and inspection will be requisite. The stereotyped results and mechanical methods which formal examinations often entail can thus be qualified and supplemented by the more elastic and instructional processes of inspection.

Educational administration in Great Britain.

It remains to add a few words as to the 'Central Authority' through which educational administration is conducted. There are separate authorities for Scotland and England but both are located in London. In each case the working departmental head is assisted by a staff of assistant secretaries, 'examiners' and clerks. The Central Authorities receive and pass orders upon inspectors' reports, initiate new departures in educational organization and regulate the execution of the same. They also control the distribution of monetary grants and lay down general rules for the financial management of various classes of recognized institutions. Under their authority also are prepared detailed schemes of work as well as general suggestions for various educational courses.

The Central Authority.

'Examiners.'

The staff is not necessarily recruited from persons possessing a first hand acquaintance with actual teaching or with the work of inspection. The 'examiners' however are mostly drawn from the same sources as the junior inspectors and usually possess high academic qualifications. I understand, however, that preliminary training in the art, science, or history of education is not held an essential qualification for such appointments.

Department of special enquiries.

In connection with the English central authority there is also a 'special intelligence' department for the prosecution of special enquiries into educational questions at home and abroad. The reports published under the auspices of the late Director of this branch, Mr. M. Sadler, constitute a very valuable and interesting source of information to all educationalists.

Matters not directly under the Central Authority.

The Central Authority thus takes to itself many of the purely administrative functions undertaken in Bombay by the divisional and district inspectors and controlled by the Director of Public Instruction. The conduct of educational institutions, in behalf of either Government or local authorities, the appointment, pay or control of teachers, however, do not fall within the scope of the British Educational Departments, except in so far as their general regulations indirectly affect the same. The immediate responsibility in such things belongs to local or special bodies.

British Centralization undesirable in Bombay.

The British system of departmental centralization would appear scarcely feasible in the Presidency, nor perhaps is it desirable. Even in Great Britain complaints on the part of the educational public against the Department are not unknown, but these are directed against the Central Authority rather than the Inspectorate. The former is felt to be, at least occasionally, out of touch with both local aspirations and local actualities and to be liable to the dangers and illusions which beset a remote and academic point of view. In Bombay the variety of languages, races and conditions in the different provinces of the Presidency, as well as the great distances and less perfect means of communication, require that educational administration should devolve upon local educational officers practically and personally acquainted with the needs and circumstances of each division and district, under the control of a chief similarly qualified.

Suggestions *re* Inspection.

In conclusion the following suggestions may be offered for consideration :—

(*i*) Specialization: to be secured by the appointment of special or occasional inspectors (or examiners) for particular subjects, who should report to the divisional inspectors.

(*ii*) The training and 'apprenticeship' of Inspectors: in England aspirants for Inspectorships are being encouraged to attach themselves for some time to a training college (not as pupils necessarily) or to obtain a University diploma in education, or the equivalent, previous to appointment. Subsequent to appointment they are not admitted to independent charge of a district until they have learnt their work under a full inspector. Some preliminary knowledge of the science and art of education should be insisted upon in the case of our own Inspectors, who previous to receiving a charge should be attached to an experienced Inspector, much as young assistants are attached to a Collector on joining.

(*iii*) The institution of an "intelligence branch," for the collection and collation of educational information from the various divisions of the Presidency and from the rest of India. Such an intelligence officer would by personal travel and investigation relieve the Divisional Inspectors of much of the extra report work for which they are called upon, and would be able to examine current educational literature and to sift therefrom details of practice and method suitable for trial in the Presidency. Continuous pressure of routine work administrative and inspectional at present debars inspectors in many cases from keeping abreast with the progress of educational ideas, and education suffers accordingly.

(*iv*) The adoption of printed forms of report similar in principle to the British reports but modified to suit local circumstances.

(*v*) The introduction of log-books and class records into *all* recognized schools.

(*vi*) 'Grouping': schools of approved efficiency not requiring annual examination might be permitted to group pupils for certain subjects ac-

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Notes.—[1. Lady Inspectresses assist in inspection of girls' and infants' schools but they are not the sole inspectors of such institutions which are also visited by the inspectors.

2. Special classes and schools are being provided for (1) Blind, (2) Deaf-mute, (3) Defective, (4) Epileptic children. Such are inspected by H. M. I. (*cf.* Scotch Code, 1903, p. 11)]

cording to proficiency and to make promotions in such groups irrespective of the formal standards, subject to the approval of the Inspector.

(*vii*) Visitations of all schools at least twice a year; this might entail an increase in the number of assistant deputies. The curtailment of office and report work would leave existing assistants freer but, even so, their number would probably be inadequate. It might be possible in the case of primary schools to select certain head-teachers for special temporary duty of this kind. (*Cf.* • The 'organizing teachers' of the English Code, 1903, sec. 5, p. 2.)

B.—The Training of Teachers.

In Great Britain the training of teachers falls into 4 branches, *viz.*:—

Branches of training in Great Britain.

1. The pupil-teacher system.
2. The primary training college system, carried out through the media of
   (*a*) Residential colleges, which may be sectarian or unsectarian.
   (*b*) Day training colleges (or classes), usually (but not necessarily) unsectarian.
3. Secondary training carried on in classes or in colleges, either 'day' or residential. Some of these institutions may be denominational.
4. University efforts to promote a knowledge of the science, art and history of education. These usually consist in the offer of a special 'diploma' to candidates passing a special examination, or in the appointment of education as a subject permissible in the degree course, or in both. As such they are directed to the encouragement of both primary and secondary training, though the conditions for the diploma are usually more applicable to secondary candidates. In some Universities a Professorship of (or Lectureship in) Education has been created.

Inter-relation of the 4 branches of training.

The pupil teacher forms the basis of English elementary educational organization. The system is, too, of great importance in Scotland but does not appear to have the same vital organic connection with the whole fabric of elementary education that it has in England. The conditions under which it works there also differ in certain noteworthy respects from the circumstances of the English system. Between the system of primary training and the hitherto unco-ordinated attempts at secondary training there has long been a wide gap, especially in England. This is however being slowly bridged. More primary students are seeking to acquire a training which in many respects is secondary, while a few secondary institutions have begun to recognize, not so much that primary teachers may be turned out as a by-product, but that secondary training involves not a few elements that are common both to it and to any well considered primary course. Even in England some students of primary training colleges eventually find work in secondary schools, while in Scotland no one dreams of limiting primary students (who often may obtain good academic degrees) exclusively to primary schools.

I proceed to deal with the four branches of training in their order.

I. The pupil teacher system.

Pupil teachers in England.

In the English Code* a pupil teacher is defined as a boy or girl employed to serve in a public elementary school, *during some portion of the school hours*, under the superintendence of the head teacher, *on condition of receiving suitable education*. Candidates must be approved by H. M. I. and pass a simple general examination. In the case of rural candidates this examination consists of "the 3 elementary subjects up to and including the work of Standard VII and the elements of grammar, history and geography." Girls must also show proficiency in needle-work. For other candidates the details of the examination are set out in Schedule V of the Provisional English Code (*1903*). The engagement is ordinarily for 3 years but rural candidates are engaged for 4 years while for certain other cases the time is 2 years or 1 year.†

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* English Provisional Code, 1903, sec. 31.
† Do. secs. 39 and 40.

The minimum age of acceptance is 15 (though 'rurals' may be between 14 and 15) but boy or girl 'probationers' may be enlisted as young as 13 years of age. A clause in the code definitely forbids 'probationers' serving more than half time in school. The same restriction has not been explicitly imposed upon full pupil-teachers, but the wording of the code and the general practice in 'centres' tend to enforce it for all those whose education is not left solely to the head teacher and to the discretion of local managers.

Education of English pupil-teachers.

"Suitable education" may be provided in 1 of 3 ways:—(1) the head teacher of the school in which the pupil-teacher serves is made responsible for this: or (2) pupil-teachers may receive instruction at secondary schools approved by the Department: or (3) they may attend central classes at a 'centre'.

(*a*) by head teachers.

The first is the practice usual in country districts remote from 'centres' and ill provided with suitable secondary schools. It appears unsatisfactory as a system of education: since (*a*) the head teacher has as a rule quite enough work of his own apart from educating pupil-teachers: (*b*) the pupil-teacher receives often indifferent attention and in any case is very unfavourably situated in this respect as compared with his urban colleagues who are within reach of centres: (*c*) the head teacher, even if he does his duty, often has nothing that can be called higher education in the true sense to give and may not be able to instruct in method, though himself a good teacher: (*d*) the pupil-teacher never thus gets a fair chance of being lifted above the primary horizon in his educational views or of moving out of the merest elementary routine in his practice.

His Majesty's Inspector is directed to test the progress of such persons and to advise the head teacher as to their training and education, but his visits afford too little time for detailed supervision or instruction. No intermediate examination is now held by the English Department between admission and the final test, the King's Scholarship examination. Hence the rural pupil-teacher may drift on, only to be hopelessly rejected at last, with what benefit to the classes whom he takes may well be imagined. To expect young persons of such an age and in such conditions either profitably to attempt 'self-culture' or adequately to realize the seriousness of their obligations is to expect not perhaps the impossible but something that is perilously near it.

(*b*) in secondary schools.

The second course (*i.e.* education in suitable secondary schools) is a practice more commendable to educationalists, but in England such schools willing to accept pupil-teachers are not plentiful and the practice has not been extensively adopted. The 3rd plan, that of gathering pupil-teachers at centres, is the one that now finds the greatest favour.

(*c*) in 'centres'.

These central classes are often housed in fine and well-equipped buildings where the instruction is given by a numerous and highly qualified staff.

I visited several institutions of the kind (*e.g.* at Bolton, Bristol, Newport, Oxford, Salford) and was much struck with the completeness of the organization and in several cases with the excellence of the buildings and general arrangements. The fact however that the Departmental entrance examination is organized so as to allow the admission of pupils direct from the ordinary elementary schools leavens even such centres with a number of insufficiently educated children.

The want of a leaving certificate test, the absence of anything corresponding to the Scotch supplementary course required for the merit certificate, the somewhat too hasty and general substitution of inspection for examination have all exercised an adverse influence upon the quality of the candidates for pupil-teacherships in England. In some cases a Higher Grade school under a trained headmaster with high academic qualifications (*e.g.* at Salford) has been instituted in connection with the pupil-teacher centre, but, since the appointment of pupil-teachers is not restricted to scholars of such (or other equally advanced) schools, this measure has not had the success that it deserves.

Pupil-teacher centres.

A natural outcome of this state of things has been a determined attempt upon the part of more progressive school boards to improve the general education of the pupil-teachers without however altogether breaking with the Departmental courses and regulations. It is this attempt that has resulted in the erection of the well-equipped and well-staffed centres that are now to be found in the larger English municipalities. The Department has allowed the Boards a

fairly free hand and in consequence the general education of the pupil-teachers is being considerably improved. A study of the regulations of such towns as Newport, Bristol, Bolton and Salford will show the lines upon which the reform is being conducted. The centres are being converted into special secondary schools, of a somewhat narrow range perhaps, in which pupil-teachers are enabled to make up the deficiencies in their previous education. Then at several such centres the Boards have instituted special entrance examinations, either in lieu of, or in addition to that of the Department. Moreover attractions are held out to induce persons of higher age and qualifications to undertake the course. Thus at Newport matriculates of the London and Welsh Universities are excused the special entrance test and preference is given to such applicants over others. At Salford the courses are so arranged as to admit of pupil-teachers studying for the preliminary examination of the Victoria University and in some cases extra teaching is given to enable students on passing out to join the Oxford or Cambridge Day Training College. Although the Department has given up the intermediate examination of pupil-teachers, Salford arranges with the Victoria University for an annual test of the 1st and 2nd years.

King's Scholarship examination.

Speaking generally, however, the curricula of all centres are still largely (though not entirely) governed by the Departmental final test, *viz*:—that of the King's Scholarship examination. The subjects which this involves are set out in schedule V of the English Code for *1902*, (English Code, 1902, Section 47). They include Reading and Recitation, English, History, Geography, Arithmetic, Euclid and Algebra (for boys), Needlework (for girls) and Music. Elementary Science and Drawing are optional: the Department however 'recommends' that pupil-teachers shall take a course of instruction in drawing during their engagement and provision for instruction in both these subjects is usually made at the centres (*e.g.* at Salford). That both are required by persons proposing to become elementary teachers would appear indisputable. The Code curriculum further includes "Teaching". Under this head come the following details:—"to set copies on the blackboard, to correct dictation, exercises, sums, copies, to question a class, notes of lessons, to give a lesson on a subject taught during the year, or to give a lesson to an infant class."

Professional training of pupil-teachers.

It will be noticed that nothing is said in the Code of any formal instruction in the theory of Education or the art of school management as such. The history of Education and advanced subjects such as Psychology, Logic, Ethics, are also omitted. The dominant idea of the Department at present seems to be that the less abstract instruction the pupil-teachers get in such matters, the better for them, the obvious reason being that the majority are not well enough educated to profit by it. Such instruction is therefore deferred till the College course.* On the other hand a good deal of practical knowledge is introduced incidentally in connection with the pupil-teacher's work in school. His Majesty's Inspector at his visits hears specimen lessons given (generally of about 20 or 30 minutes duration each), examines the pupil-teachers' notes of lessons and records of work and the head teacher's memoranda of their general conduct and efficiency. The head teachers moreover are expected both by the Department and the Boards to give advice and direction as regards method and management. Some Boards however are not content with this limitation to the professional side of the centre and have instituted courses of lectures in method with special reference to the teaching of the subjects of the Primary Code, to Infant classes, science teaching, drawing, etc. If the centres are not to degenerate into *mere* secondary schools such a course would appear advisable. Whether it would not be better to abolish all professional work and to concentrate upon secondary instruction entirely is another question which will be referred to later.

Subsequent career of the pupil-teacher.

Provided he passes the King's Scholarship examination high enough to be selected for admission to a Primary Training College, the pupil-teacher will proceed to a further course of collegiate training. Should he not be high enough to be so selected, he may be recognized and employed as an "assistant

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*The Scotch syllabus for the examination however includes "the methods of teaching ordinary subjects and the methods and principles of infant teaching and discipline and of cultivating the intelligence of children."

teacher" (English Code, 1902, Sec. 50). If he has been employed for at least one year in a school under inspection (or in a pupil-teacher centre) and has a good report from His Majesty's Inspector, he may present himself at the Departmental examination for Certificates of Training held annually at each Residential Training College in July. Or if he gained a first class in the King's Scholarship examination, has served two years in a public elementary school as "an additional teacher" (English Code, Sec. 68) and is specially recommended for his practical skill in teaching by His Majesty's Inspector, he may be recognized as a "provisionally certificated teacher" (English Provisional Code for 1903, Sec. 52) and may be appointed to the headship of a primary school of not more than 50 pupils (English Code, Sec. 82). If he fails in the King's Scholarship examination he may still be recognized for the 2 years immediately succeeding the examination as a "provisional assistant teacher" (Sec. 49, English Code). This concession, however, will probably cease after 31st March 1904.

Scotch pupil-teachers.

The Scotch pupil-teacher system differs from the English in several points, *e. g.*, under it a pupil-teacher is defined as a boy or girl employed to serve in a day school under certain conditions none of which, however, includes any limitation on the hours of school work. In other words, the system does not explicitly insist on half time in school and half time for study. The minimum age is 14 (not 15 as in England) but apparently "probationers" under 14 are not recognized. The length of engagement is for four years if entry is at 14, and for two if entry is at 16. The qualification for admission at 14 is (in addition to gaining a Merit Certificate) "proficiency in the work of a second year's course of a Higher Grade school or Department." Candidates at 16 years of age must pass the intermediate Departmental examination held at the end of the second year of the four year course, or, in addition to passing a preliminary examination, have obtained a pass in the Leaving Certificate examination* in the lower grade in at least three subjects, of which one must be English, one an ancient or modern Foreign language and one Mathematics. The King's Scholarship examination is the final test as in England but a pupil-teacher who has obtained a pass in the Higher Grade at the Leaving Certificate examination in at least three subjects,† or who has passed the preliminary examination of any Scottish University and has obtained a good report from His Majesty's Inspector for reading, recitation, drawing and teaching and (for girls) needlework, may be reckoned as having passed the King's Scholarship in the 1st class.

So far as the regulations regarding qualifications for admission and the provision for secondary work are concerned, the Scottish system seems in advance of the English. Thanks to a supply of suitable secondary schools and to the encouragement which the Scottish Department's rules give to persons undergoing secondary instruction, the same necessity for special education in what are the rudiments of a secondary course does not exist in the Scottish pupil-teacher system as in the English. Hence we find a less elaborate organization, fewer showy buildings, but, speaking generally, a greater percentage of efficient, because more highly educated, pupil-teachers. Moreover, this higher education having been acquired in most cases in schools of a normal type, not in 'centres', is of a wider and more general kind, and the trail of the mere elementary school is not over it all.

Applicability of the pupil-teacher system to the Presidency.

The training of primary teachers in England appears to be indissolubly connected—for better or worse—with the pupil-teacher system and the main hope of improvement in the immediate future lies in the 'centres'. In Scotland the connection though close is neither so organic nor so important. It is conceivable therefore that in the latter country the question whether the whole system cannot be eventually dispensed with, may in our own time fall within the range of practical educational politics. For us in Bombay the question is not without interest even at the present day. We have not the pupil-teacher as he or she is to be found in Great Britain: our so-called pupil-teachers are merely monitors or monitresses‡ and educationally are a negligeable quantity. The tendency has been to eliminate them, and on the whole rightly. On the other

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* This is an examination for secondary schools.

† One of which must be English, including History and Geography, one Mathematics and one an ancient or modern Foreign language.

‡ cf. the stipendiary monitors in the Scotch Code, 1903, Sec. 70.

hand our training colleges are not able to turn out a supply of trained teachers as quickly or as plentifully as the needs of the Presidency require. Moreover, between passing out of the primary school and appearing for the entrance examination at a training college a would-be teacher has far too much time on his hands which is not fully or very profitably employed in reading for the Public Service Examination. The result is that the first year at college is largely taken up with completing or revising work which should already be perfectly familiar. Could not therefore a modification of the pupil-teacher system be adopted by us, which would obviate these defects?

Advantages of the pupil-teacher system.

Before answering this question, it is necessary to realize the exact advantages and disadvantages of the system. In its behalf it is claimed that it is a genuine apprenticeship for the teacher's craft, that, at an age when the apprentice is plastic and peculiarly open to impressions and direction, it affords him a practical training for his future career which no training college can give later in life. A mechanical capacity in handling a class is thus produced and the pupil-teacher acquires a familiarity with his *milieu*, in which the ordinary trained man is often, at first at least, conspicuously lacking. Such practical knowledge provides an excellent basis for subsequent instruction in theory which the pupil-teacher is able to co-ordinate with facts within his own experience. From the point of view of organization the system is the cheap support of indigent or economical managers and a plenteous source of supply for the training college.

Defects of the pupil-teacher system.

All of this may be granted without much difficulty, but in themselves such arguments are not a sufficient justification for the creation of a system such as that of England. The pupil-teacher is, to put it plainly, a *pis aller* and his system a device of weakness. Education is neither a craft nor a trade. From one point of view it is a profession but, even in medicine, students are not permitted to experiment, either surgically or therapeutically, on the living human subject at the mature age of 14, or before they have acquired the slightest qualifications. Mechanical capacity *may* be acquired by the pupil-teacher at the expense of the *corpus vile*, but even so it is not necessarily of a desirable kind. That his education is deficient, that he has no time (or not enough) for mental culture and that, even if he had, he is not of an age to use it aright without direction are equally cogent objections pointing to one conclusion. This, in brief, is that, given an adequate secondary education followed by a course of sufficient length * at a training college to ensure a real aud practical training in school work together with a reasonable knowledge and appreciation of theory, we can dispense with the pupil-teacher and the crudities and limitations of his system.

Higher vernacular education suggested as a substitute for the pupil-teacher system.

If therefore we are to endeavour to re-inforce our Bombay training system, the better method would seem to be not the borrowing of the English pupil-teacher system with its expensive 'centres' (the equipment and maintenance of which is far beyond our means), but an extension of our vernacular system in the direction of higher education, so as to admit of a vernacular student being much better equipped when he enters the training college. The years between 13 and 17 might well be devoted to such secondary instruction (in which English need by no means be an essential subject). The standard of admission to the training college would *ipso facto* require raising and the level of the work during training would be elevated, while considerably more time would probably become available for instruction and practice in special subjects and methods, *e. g.*, kindergarten work, drawing, nature study, object lessons, etc., since the old and tedious task of revision would disappear from the first year's curriculum. That this scheme leaves the question of a more rapid supply of trained men untouched may be admitted. But this is a temporary, not a permanent, desideratum. It is better moreover to produce a smaller number of men whose training is well matured and genuine than a quantity of half educated and too quickly 'trained' boy and girl 'teachers'. If more fully trained men are required the only really satisfactory method of supplying them is to increase the number or

*The usual course in Great Britain is for two years. The English Committee on Training College courses strongly advocated the addition of a third year to the course for primary students at Training Colleges.

extent of the present colleges* or to create agencies (*e. g.*, day training classes) which will produce the same results. In any case a higher education would be necessary as a basis.

Failing the institution of a higher grade of vernacular schools for intending primary teachers, it might be possible to attach them to "Middle schools" and to develop a special course in these for their benefit. The present Middle School course would certainly need modification.

2. *Primary Training Colleges.*

Residential Colleges.

(a) Residential Colleges.—The Departmental rules for these will be found in Part II of the English Code for 1903, and in Chapter IV of the Scotch Code (1903). The code regulations contain nothing specially noteworthy from our point of view except perhaps the clause that no grant will be made unless the Department is satisfied with premises and general managements as well as with the staff and curriculum. In this connection it should perhaps be pointed out that the Department maintains no training colleges of its own. Another clause to the effect that a practising school must be included either "on the premises or *within a convenient distance*" (in the Scotch Code the words are "training colleges are institutions . . . . . having practising schools connected with them in which the students may learn the practical duties of their profession") is interesting, since it implies that it is not considered necessary that the practising school should be part and parcel of the college itself or that it should be located within the same building. Thus the well known "Boro' Rd. College" at Isleworth has no practising school of its own, the schools used as such being at a distance of a mile or more from the College. They are, moreover, in no sense special model schools but just local institutions under Government inspection and available for purposes of practice by the college students. The desirability of such an arrangement will be touched upon later.

Practising schools in such.

Qualifications for admission to English Primary Colleges.

In an English college the "recognized students" are termed King's Scholars. Such may include (1) those who have passed the last or last but one preceding King's Scholarship examination in the first or second class, (2) any certificated teacher who has not been trained for 2 years and who wishes a second year's training, (3) any graduate (or person qualified by examination to become a graduate) in Science or Arts of any British University, recognized by the Department for the purpose, who wishes for a year's training, (4) any candidate over 18 who has passed any of the examinations given in Schedule D of the Code. The list includes various English and Welsh matriculation tests, the Higher Local Examinations of Oxford and Cambridge and the Higher Certificate of the same Universities' Joint Schools Examination Board. A medical certificate of health is required and an engagement to become an elementary teacher. The course of training is ordinarily for two years only but in a few cases a third is permitted†.

The bulk of those admitted under the first head consists of pupil-teachers, but it must not be assumed that all who pass the required test satisfactorily can be accepted. The colleges' accommodation is limited and taking all the possible vacancies there is not room for all applicants. Those colleges which have the higher reputation are able to secure the better students and can afford to reject 'the ruck'‡. These tend to distribute themselves among the lesser and inferior institutions. One obvious result is that there is a considerable disparity in the intellectual standard and in the general tone of the work between the higher and lower colleges. This may be aggravated in the case of denominational institutions by their sectarian organization which limits students to members of a prescribed creed, and thus curtails the field of selection. The second class of entrants corresponds to a class already encouraged with us. The utility of inducing partially trained teachers to continue and complete their training is obvious. The two other clauses are intended to open the doors to persons who have already received a University or higher class

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* *e. g.* by encouraging and subsidizing voluntary agencies under governmental supervision.

† It is generally spent abroad in France or Germany. The student completes his or her study of French or German and takes note of the local educational system and methods.

‡ cf. Rules of Admission in Prospectus of St. John's College, Battersea.

secondary education. Such are distinctly in the minority in the English colleges at present but their number is increasing.

Scotch Training Colleges—qualifications for entrance.

The Scottish Code's regulations for entrance coincide in principle with those of the English and call for no special remark. Pupil-teachers who have passed an examination reckoned under article 70 (*d*) 6 (*a*) of the code (*vide supra*), equivalent to the King's Scholarship examination, and non-pupil-teachers with similar qualifications coming under article 95 (*a*) 3 are examined specially for admission by the authorities of the particular college to which they apply*. The Scotch course also is usually a two year one.

British Primary Training Colleges—2 classes of students, (*a*) University, (*b*) non-university.

The students in British Training Colleges, roughly speaking, fall into two classes, (*a*) those who are reading for a University examination, (*b*) those who do not aim so high but are content to take the Departmental Certificate and in consequence adhere to the course of instruction leading up to that goal.

Scotch course for non-university students.

In Scotland that instruction includes the following (cf. Circular 329 of Scotch Department, 30th August 1901) :—

A.—1. Physical exercises and drill.
2. English.
3. History.
4. Arithmetic, Algebra and Geometry.
5. Science.
6. Geography.

B.—1. Voice Production and Phonetics.
2. Drawing.
3. Singing.
4. Needlework (for women).

C.—1. Principles of Education.
2. School Methods and Practice in Teaching.

An appendix explains the nature and scope of this instruction. In the subjects classed under *A* the principles and laws involved are to be kept in view and explained. In English literature, style and literary and historical associations are to be treated and home reading is encouraged. The study of history is to be comparative and not confined to one text; origins and present institutions alike are to be considered. In science the course is to be one of "first hand investigation" and experiment, its primary object being 'disciplinary' in the training of students in methods of scientific investigation. The student is to represent and describe phenomena as he actually sees them, and to form his own theories and apply his own tests under guidance from the instructor. In geography practical exercises in construction and use of maps including sketch maps from rough surveys of the physical features of the neighbourhood are recommended.

For drawing special instructions are given which will be detailed later. In head *C* the principles of education are to include a preliminary study of psychology, logic and ethics. School methods and correlated practice are to be specially studied in connection with reading, spelling, English, history, arithmetic, nature study, geography, writing, drawing and a second language. Practice in conducting a class in physical drill is also to be given. The course is to combine the theory and practice of teaching the subjects named and to comprise discussion of the objects aimed at in teaching each subject, the criteria of good results, proper gradation of subjects to suit different classes, methods of correlation, and difficulties encountered by children in the study of each subject. These points are to be exemplified from classes in the practising school and practice in each subject is to be combined with or follow closely upon the discussion of that subject.

English course for non-university students.

Circular No. 454 of the English Board of Education (19th June 1901) runs on the same lines as the Scotch instructions.† It is based upon the suggestions of a special committee, which include *inter alia* recommendations for a special third year course in agriculture at an agricultural college for selected teachers and a suitable course in rural subjects for students intending to serve in country schools. Provision for specialization in Kindergarten work at colleges willing to give a special course is also proposed, but it is recognized

* cf. page 3, Prospectus of the United Free Church of Scotland's Training Colleges.

† Modified by Circular 463 of June 1902. In this certain optional subjects are suggested for *honours*.

that it is "possible and desirable" to recruit Kindergarten teachers from other than ordinary training colleges. To meet these recommendations the circular adds a list of special optional courses for the training college curriculum, *e.g.* Rural Subjects (*e.g.* Elementary Botany and Biology in close connection with rural life and industry), and advanced instruction in Kindergarten subjects.* This circular was followed by the issue of a set of specimen courses for training colleges.† Both in England and Scotland, however, a free hand is left to the college authorities in working out the details of their own schemes.

Drawing in Primary Colleges.

In the Scotch Training Colleges and the best English ones special attention has been given of late to drawing in all its branches, in so far as they are useful to a teacher, and especially in connection with "Nature Knowledge." Thus in the Borough Road College "drawing" includes (*a*) pencil work, *viz.*, free-hand sketches from Nature (*e.g.* leaves, shells, butterflies, flowers), design (geometrical with ruler and compass and original design from natural *motifs*), model drawing (geometrical models and common objects and the *teaching* of model drawing), memory drawing; (*b*) brush work, *viz.*, brush drawing in mass (simple and natural forms, *e.g.* leaves, fruit, vases), simple brush rendering of butterflies, etc. (studies in form rather than colour), design; (*c*) chalk on black-board, *viz.*, freehand copies as in (*a*), outlines of insects, etc., as in (*a*), design, models and common objects, memory drawing. In the Scotch Colleges, in addition to the above, I noted work in charcoal, and coloured chalk on brown (or tinted) paper, brush work in monochrome, as well as polychrome, etching in pen and ink, geometrical drawing and clay-modelling, the last being carried on *pari passu* with the drawing. Geometrical and mechanical drawing, it may be noted, are now, quite rightly, carried on in connection with mathematics and with cardboard modelling or woodwork, or other forms of manual training, not with drawing as such. The black-board drawing entails practice in "*free arm*," or drawing on a large scale from the shoulder, the chalk being held so as to secure the utmost freedom of wrist action. Excellent directions for this and the subject generally are contained in the appendix to Circular 294 (1st August 1900)† of the Scotch Department. The same appendix contains some sound practical suggestions for Nature Knowledge with which may be compared the general remarks on page 27 in the English "specimen courses" of 1901.

Nature study in Scotch Colleges.

Lastly, I reproduce the remarks quoted on page 41 of the Scotch report for 1901-1902 on Training Colleges in regard to drawing, manual work and nature study: "nature study and representation is the dominant note (in drawing). The *systematic study and representation* by each student of the growth and development of the whole or part of some growing plant, tree or flower carried through one or more seasons would be of great value as educational training.‡ Design and study of colour would follow."

For nature study and elementary science details are given in the "specimen courses" and need not be repeated here. I would specially commend to notice Course No. IV (specially adapted for a country or Provincial College). A very practical, lucid and stimulating "outline of a course in natural history for students in Training Colleges" (illustrated by excellent diagrams) is published under the auspices of the Aberdeen University. Speaking generally, Scotch Colleges have made more way with the subject than English ones.

In the "professional" subjects the actual theoretic instruction often takes a wider scope than the departmental codes enforce. Thus, taking the London Primary Colleges generally, I found that the theoretic teaching in education included:—

(1) Aims and methods of instruction and discipline (lectures).

(2) Principles of ethics, psychology and logic (lectures).

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*In the "specimen courses" a knowledge of the principles and methods of Froebel is recommended for *all* students.

† Copy forwarded.

‡ This is done in some Scotch Colleges: the study of development is combined with pictorial and diagrammatic illustrations of the stages. Careful records are kept by each student of the object under his observation.

(3) Organization and management of elementary school classes (especially in respect of time-tables, schemes of work, records of work, registers, etc.) (lectures). Details of course in "teaching" in London Primary Colleges.

(4) Principles and methods of Froebel (lectures, discussion and observation).

(5) Hygiene in schools and school premises (lectures). The tendency is to omit this as a separate subject and to lump it in with "science", not perhaps always with profit to the student.

(6) History of Education (as illustrated by the life and works of typical educationalists with perhaps a special study of a particular work by one of them). This forms part of an 'advanced course' at Borough Road. At Stockwell (female) College no history of Education as such is done. At St. John's (Battersea) the second year students study lives of Pestalozzi and Froebel and read "Quick". At St. Mark's an outline of the subject is included in the regular course.

(7) Modern methods of teaching modern languages (*e.g.*, French)—also an "advanced course"

The "practical" work in these colleges resolves itself into the following: (1) Model Lessons, also called "Demonstrations," given by the college "Master of Method" or one of his assistants; (2) Criticism Lessons; (3) Practice Lessons in the practising school; (4) Observation work (in ordinary primary schools;) (5) Debates and discussions.

Most of these forms of practical work are known to our Primary Colleges, but I do not think that sufficient prominence is given by us to all of them, notably Nos. (4) and (5). They are certainly all requisite, and provision for a regular rotation of them should be made for each student. As regards the criticism lessons the practice of the Borough Road College is well worthy of notice. There "the criticism lessons run in series. For five or six weeks the attention of students is concentrated on the methods of teaching *one* subject of the elementary school.* The series is rounded off by a discussion. For this purpose seven or eight students are assigned to each senior tutor who receives a suggestive paper containing an outline of the points that particular lessons and class criticisms shew need further discussion and more general matters connected with the teaching of the subject." The first year students at this college do not as a whole attend these criticism lessons, but a few are present in turn. The demonstration lessons are considered more useful for them as beginners. In regard to this "practical" work and its dangers and difficulties special reference should be made to an essay on "The Study of Education" by Mr. J. J. Findlay (in the special reports series, published by the English Educational Department). Mr. Findlay holds that "practice should comprise (*a*) observation of methods of teaching followed by experienced teachers, (*b*) *continuous* teaching by the student of a class under competent direction and criticism. For this purpose a school of demonstration and practice is necessary and should be incorporated with the Training Institution." With this last dictum I agree unreservedly. A model practising school is essential for a properly constituted Training College and should be under the direction of its authorities and in connection with its buildings in order to save time and energy. Practice in *ordinary* schools is desirable and essential after a ground work of good methods and principles has been attained, but these cannot be acquired with the same facility or to the same advantage in an ordinary local school as in a model one moulded by the college to suit its own objects. The curriculum of such a school should be left to the authorities responsible for the direction of the college and should not be of a stereotyped kind. Lastly, in connection with practical work Mr. Findlay's remarks on the faults of the ordinary "criticism lessons" should be carefully studied. The lesson is too often an *isolated* "performance," a mere exhibition, not a part of a regular routine of class work. Hence no previous observation is possible and no judgment on the real progress of the student can be made. The children play a very secondary part and there is no "organic"

Practical work in Primary Training courses.

Practising Schools.

Criticism lessons.

* For illustration see College report for 1900-1901, page 5.

relation between them and the teacher or between their work and his. The criticism usually follows immediately after the lesson, no written criticisms * are prepared, the Principal and a lecturer or two give a few desultory remarks, in which the criticism is somewhat casual, while the students are mostly dumb or futile.

I am bound to say that in not a few instances my experience more than confirms Mr. Findlay's strictures. In Scotland particularly I found the criticism work disappointing and in this respect I venture to think the English Colleges superior. In Scotland too much of the work that I saw was hasty, mechanical and superficial, far too little time being allotted for each individual lesson, and even less for the actual "criticism". In one case no less than six such "lessons" and the criticism † were huddled into the space of one hour!

University students in Primary Colleges.

The professional work (practical and theoretical) is taken by "University students" in the Training Colleges as well as by the others. For the former, however, the general work differs considerably and is naturally moulded on lines marked out by the University subjects. In the Scotch Colleges a special three year course has been devised ‡ which is stated to give satisfaction. As however this class of student is not and cannot be represented in our vernacular primary Training Colleges I need not enter into details of the courses. Moreover I cannot help regarding the mixture of academic and professional work in the English Colleges as a mistake.§ It results in an unwieldy and intricate time-table and, in what is worse, a general tendency to sacrifice the purely educational side to the academic. The Department course for the certificate is despised in comparison with degree work.‖ All the more ambitious students wish to try for the latter and regard their professional work as a "parergon" if not as an encumbrance. As it is, far too little practical work (only 150 hours are required in the whole two years) is done and this is too often rushed. Even in some of the best residential colleges a feeling of subdued contempt for "boshology" (as I heard educational theory elegantly termed in one institution) is evinced, and is expressed not merely by students but by members of the staff, while those who hold such important posts as Masters of (or Lecturers upon) Method are treated *de haut en bas* and exist apparently¶ as "necessary evils". Lastly, the pressure of degree work tends to curtail, if not to annihilate, time and inclination for advanced practical and theoretical work in education, especially in regard to such subjects as child study, nature knowledge, Kindergarten, psychology, etc. In interest and genuinely educational effect advanced personal investigation of a practical kind in such matters would probably be far more fruitful both professionally and generally than "cramming for a degree". The cult of the B.A. fetich is like to prove as deadly in Britain as in India and apparently the people "love to have it so". A University education is no doubt desirable, but it is equally desirable, in present circumstances, that it should be acquired as far as possible before the period of *special professional* preparation begins. Or if the two are to be combined, a thoroughly harmonious scheme uncramped by the fetters of formal (and possibly incompatible) examinations should be devised. This thing is done better in America (vide "The Training of Teachers in America," vol. 10, pt. I., pp. 423—444, English Education Department's Special Report).

Dangers of allowing degree work in Primary Training Colleges.

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* Written "notes of lessons" prepared previously are not sufficient, however elaborate they may be. In fact elaborate notes are *not* wanted: brief working notes to which written criticisms are added by the Master of Method are far more useful.

† Taken in lump form at the close. The "notes of lessons" were on a scale of 20 to 30 minutes lessons, the actual time allotted to each student being under 10 minutes!

‡ *Vide* Section III of the Scotch Circular 329 of 30th August 1901 and Dr. Stewart's Report for 1901-1902, page 31. The "new examination" system does not apply to this course for which a suitable test had already been devised, *cf.* Circular 352, 8th March 1902, Section 17, Circular 329, Section IV.

§ *Cf.* Section 6 of Memorandum of Committee on Training College courses, attached to English Circular 454 of 19th June 1901.

‖ *Cf.* remarks on page 3 of Borough Road College's Report, 1900-1901.

¶ Yet it is essential that the ideas of the professors in particular subjects and those of the Master of Method should harmonize as regards method and that each should learn from the other—*cf.* Dr. Stewart's report, section II.

New system of examination in Primary Colleges.

Steps however in this direction have been recently taken in both England and Scotland. The Departments have dispensed with formal intermediate examinations and substituted a more careful system of inspection combined with the introduction of outside experts as examiners for the old rigid written tests which were so frequent. The English Circular 463 of June 1902, modifying that of August 1901, restricts written examination in the final certificate test for 1904 to Theory of Teaching, English Language and Literature, History and Geography, Composition, Arithmetic and Easy Mathematics. A group of optional subjects for honours is also detailed in which one may presume a written test will be required only so far as the subject demands it, though nothing is said in this respect. It is however, I understand, proposed to go even farther in this direction and to abolish the old general Departmental final examination. This was a uniform test for *all* colleges under the Department's inspection throughout the country. This step has already been taken in Scotland (*vide* Scotch Circular No. 352 of 8th March 1902, Sections 6, 7 and 11, and Dr. Stewart's Report for 1901-1902, Section 1).*

Nature of the "new examination."

It must not however be supposed for a moment that the new system means a total abolition of examinations. Its effect is, in brief, merely this, the substitution of a test more continuous and more individualistic, of greater intimacy because of greater elasticity, for the old general examinations with their rigid uniformity, their mechanical character and stereotyped standards and results. In future each College will hold its own tests, with or without written papers as the subject requires, but the great test of all will consist, not in periodic papers, though of course these are not to be wholly discarded, but in the elaboration for each pupil of a continuous record of work. By their work shall they be judged and the judges in the main will be the teachers who show them how to work and share their work. With these "judges" are associated outside experts, who may be nominated by the Department or invited by the College to take part in the "new examination", and of course H. M. I. The Inspector and special examiners take note not only of the work of individual students but of the scope, method and merits of teaching in each subject. Special forms are devised for registering the character of each student's work in each subject and all these together with examination papers, the marks allotted, exercise books, etc., are submitted to H. M. I. who also makes personal investigations at the time of his visit. The final award of certificates is only made under his direction after a complete review of marks and records.

Dangers of the "new examination."

It is too early yet to judge the results of the new system, but apparently they are very promising. Dr. Stewart's report discusses them and indicates the safeguards devised to prevent any excessive variation in the standards of the different colleges (section I). There is another danger, *viz.*, that the members of the College staff may not always be equal to the very grave responsibility now imposed upon them. This is adverted to in section 15 of Circular 352 and the Department has explicitly claimed the right of satisfying itself as to the qualifications of all persons to be appointed to such staffs.

Applicability to Bombay of the "new examination."

The applicability of the "new examination" in its entirety to our primary colleges is a fair matter of debate. But it must be remembered that we already enjoy not a few of the new system's advantages, *e.g.* (1) there is no rigid and uniform system of examination throughout the Presidency—each college examines its own pupils: (2) the examinations are conducted in part by the staff of the College assisted by outside examiners (Departmental and otherwise): (3) the Inspector takes the oral test in teaching but confers in the case of each pupil with the College Principal who is present as a co-examiner. Similarly in deciding the final fate of a student a conference is held between the Inspector and Principal. The annual examinations are a necessary sequence of our system of *pro tanto* certificates and in the present circumstances of the Presidency it is hard to see how these could be given up. The new regulations however regarding "records of work" and the tests of a college's *methods* of work are worthy of application in so far as they have not yet been tried.

* *Cf.* Scotch Code for 1903, Section 42. The Departmental Certificate Examination is still held for certain classes of candidates, not King's scholars or studens, and for teachers, Sections 44, 47.

Student-life in English residential Primary Colleges.

One more point, in conclusion, regarding the English residential colleges. In most of these proper attention is now paid to the students' recreation, both mental and physical. On the average not more than 8 hours' work a day is done and in the men's colleges this total is broken up by games and exercise. Cricket, football, fives, rowing are all indulged in where conditions permit, and the earlier part of the afternoon is generally devoted to one or other pastime. Several of the London colleges are under old public school men who have been at Oxford or Cambridge and they are endeavouring to introduce into their institutions a flavour of their own school and college *ethos*. Such an influence permeates not only games but the general corporate life of the training college and imparts a breadth of view and an elevation of tone which mere enthusiasm, however genuine, for passing examinations, however difficult, could never give. The students have clubs, libraries and reunions of their own and as a rule come to look back with pride and affection on their college life. *Mutatis mutandis* the same statements are true of the women's colleges, although naturally in these the "public school spirit" and athletics do not shew signs of equal development. In general culture, however, intellectual and aesthetic, the women appear no whit inferior to the majority of the men and in many cases are certainly superior. It is much to be desired that the same spirit and tone should be found in our own training colleges, where far too little is made of the recreative side of education and where far too many hours a day are usually devoted by the students to "book grinding." An admixture of healthy sports, and the institution of field-clubs, with plenty of fresh open air life, are quite as necessary as "physical drill" and "manual training."* These necessities call for advantages in accommodation and situation which our buildings have not always possessed, but it is to hoped that in the future they may not be impossible of provision.

Women's Primary Colleges and Training.

It should be noted that all that has been said above as to primary training applies equally to women's and to men's colleges. The general departmental regulations for men and women do not differ, though in England special courses for women's colleges are provided in the specimen courses (q. v.). In England there are separate colleges for men and women. The Scotch Colleges usually are not residential in the English sense † and most provide for both men and women.‡ Two receive women only and are residential.

(*b*) *Day Primary Training Colleges in England.*

English Day Training Colleges.

These must be attached to some University or College of University rank. A local committee must be in charge of each and this is held responsible for the discipline and moral supervision of the students, for due care as to their board and lodging and for regular attendance at work. They receive a less grant than the residential colleges. Whether or not provided with special buildings (*i.e.*, buildings built for this purpose only) they are to be regarded as filling a distinct want. They supplement the work of the residential colleges and provide for those whom the latter cannot take in. They are, too, in a closer connection with Universities than their rivals, and in this way may often command better specialistic teaching and encourage wider interests. Moreover they are commonly linked with a secondary branch and the intermixture between secondary and primary students which is encouraged in some of them (*e. g.* at Cambridge), cannot but be good for both parties. Their University connection is not however an unmixed blessing, since it may tend to promote "mere degree work" to the detriment of the professional and practical side. In such an institution as the new day college under the London County Council, now connected with the London University, this is an especial danger, the risk of which the principal, Professor Adams, freely admits.

Day Training College and Universities.

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* At Borough Road, "manual training is at present voluntary." Report 1900-1901. At St. Mark's the course was "not yet arranged." At St. John's, Battersea, a simple course of practical instruction in use of tools was taken. This included drawing and object lessons on timber. In Scotland 3 colleges only do woodwork and 3 cardboard modelling (Dr. Stewart's report).

† Scotch Code, Ch. IV, sec. 83.

‡ In this case a hostel is provided for women students whose parents or guardians do not reside in the town.

Day Training Colleges and Universities.

The English day colleges are governed by the same regulations as those in force for the other colleges,* and therefore take the same professional subjects. The large majority of students, however, are expected or allowed to take the degree course.† Where the University includes 'education' as one of its 'subjects' for the degree and where the syllabus for this 'subject' has been adequately drawn up, there is no doubt something to be said for this procedure, provided that the general secondary education of the students is sufficiently high to permit them to do this with profit. This is, however, not always the case, and the question therefore arises whether it would not be better policy for such institutions to insist upon a reasonably high standard of secondary education as a qualification for entrance, and upon that basis to build a suitable educational curriculum of their own, general and professional, than to allow their students to be beguiled by the mirage of a pass degree. Men who are capable of doing well in an honours course for the degree, without neglecting their special educational work, might be encouraged to read for it, but *per se* a pass Academic degree is of no particular value educationally.

Syllabus of 'teaching' course at Manchester.

I forward copies of the prospectuses of the Leeds and Birmingham Day Colleges which detail briefly the aims and character of the work. The syllabus of the Manchester Day College may be quoted to illustrate the professional side of the work. Its outline is as follows:—

1st year.—Methods of teaching school subjects and Elementary Psychology.

2nd year.—(*a*) General Theory of Education, Elements of Logic, School Organization and Hygiene, Registration, etc., (b) Special Educational Authors.

3rd year.‡—(i) Theory of Teaching; (ii) History of Educational Theories; (iii) Special Educational Authors.

Practical work includes Criticism lessons for second and third years and practical school teaching for all years. Reading and Elocution are taken in the second and first years, as too are Drawing, Manual Training, Nature Study, Physical Training and Music and Singing.

[*Note.* The curriculum for the first 2 years corresponds (though apparently not exactly) to the Victoria University's requirements in the subject of Education in the Intermediate B.A. and B.Sc., and that for the third to those for the final degree in Science or Arts, though again apparently not exactly.§]

'Teaching' course at Birmingham.

For women (the college¶ is open to women who, however, constitute a separate department of it) some difference is made in this curriculum. Elementary Psychology is omitted in the first and dealt with in the third year together with Ethics. Needlework is the equivalent of manual training, but is confined to the first year only. Otherwise, the courses are practically the same. The school practice is usually conducted in local schools under the School Board, but Miss Dodd, the head of the women's section, also superintends a special Primary and Kindergarten School, which thus serves as a model school. At Birmingham the course for the certificate is arranged to cover *two* years only, falling into two parts, one for each year, *viz.*, (*a*) a course in Elementary Logic and Psychology together with lectures on Plato's Republic (Book II to IV); (*b*) the theory and practice of teaching (the former including the aims and ideals of education, past and present, the stages of rational method, the Herbartian 'steps,' notes of lessons, curricula and treatment of various subjects, association and concentration, physical education, organization, hygiene and discipline). 'Practice' goes on really in both years, 75 hours per year being required.†* This course fulfils the requirements in the subject 'education' for the Intermediate Science

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* English Code, Section 115, especially claus (*d*).

† See Section 6 of Memorandum of English Committee on Training Courses, Circular 454, 13th June 1901.

‡ Under Section 120 of the English Code, a 3rd year is not obligatory for the Departmental certificate and is only admitted when special educational facilities are offered.

§ *N. B.*—Pages 92 and 164, sqq. of Prospectus of the Owens College.

¶ English Day Colleges generally admit both men and women who are usually dealt with in separate departments.

†* Lectures on Reading, Music and Drawing are also given.

or Arts Examination at the Birmingham University. There is, however, a third part assigned to a third year, which includes the History of Educational Ideas, and is required if 'education' is taken as a subject for the final degree test in Arts or Science.

Possibility of Day Training Classes in the Presidency.

Obviously such institutions as these have little direct bearing on the training of our elementary teachers as at present organized. Even with the higher vernacular education which I have advocated for them, it would not be possible to range such vernacular students in line with the regulations of the Bombay University. If Day Training Colleges were started with us in connection with University Colleges it would be necessary, not merely that the University should permit 'Education' to be taken as a subject for the degree, but also to provide a special vernacular diploma for vernacular training, if the the mass of our primary teachers is to be reached. Since Matriculation requires a knowledge of English, this is out of the question. Provided it could find the funds the University, however, might institute "Extension Training Classes" at suitable Centres for primary teachers in connection with either local colleges or full secondary schools. Instruction should be in vernacular and should be directed at (*a*) improving the general education of the students, (*b*) extending their knowledge of educational theory and method, especially as regards modern developments, (*c*) imparting to students a broader view of their duties and a higher general tone to school practice.* The staff should of course be duly qualified and (on condition of granting financial assistance) Government would, as in Great Britain, supervise the appointments and the outlines of instruction. It should also be possible to extend the scope of action of our existing training colleges and this might be done by the institution of day classes in connection with them. The question, however, is largely one of funds, since the staffs would have to be increased, lecture accommodation extended, and probably some provision made for the maintenance of the day students.

3. Secondary Training Courses.

Relation of Secondary to Primary Training.

From a perusal of the details given touching Day Training Colleges, it will be perceived that the training in many of these is really of a secondary nature, especially as regards not a little of the theoretical part. Hence, in discussing them much of what is applicable to secondary training has been anticipated. It is, moreover, a much debated point whether, ideally, at any rate, a hard and fast line can be drawn between secondary and primary training. Certain methods are appropriate to certain subjects and some subjects are more suitable for higher than for Elementary Education. Hence some specialization is obviously necessary. But, on the other hand, there is a very great deal which it is essential that all teachers, high and low, should know as regards both theory and practice. This constitutes the data common to both secondary and primary technique in teaching and is of considerably wider scope than class prejudice and tradition in England admit. Setting prejudice and conventionality aside, an opponent of 'secondary training' would find it difficult to show that the principles and methods of teaching, *e.g.*, such subjects as Geography and Arithmetic to boys or girls in a secondary school are radically and necessarily different from those to be adopted in a board school. Consequently if he allows (as most are only too ready to do) that training is necessary for the one class of teacher, it is not easy to see how it can be out of place and unnecessary in the other, or how the training of the secondary man is to be *toto cœlo* different in character from that of his coadjutor, the elementary teacher.

Separation of Primary and Secondary Education in England.

In England the breach between the upper and lower branches of education is due to the isolated position of the great "public†-schools," which have been 'commandered' by the upper middle classes and the aristocracy, to the restrictions with which the ancient Universities till recently have hedged themselves, to the monopoly which these schools and colleges long enjoyed in secondary education, and lastly to the consequent depression or extinction of much effort

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* In this way the University would be brought into a real and beneficial relation with primary education.

† Contrast the use of the term in Scotland.

that could not accommodate itself to the limited and unkindly conditions in which it was set. Of late years a great change is being effected, but it is little more than beginning * and England still suffers from a lack of continuity in her educational organization. Secondary education still endeavours to identify itself with aristocratic ideas and impulses and still resents the inroads of democracy. Hence the pretence that the secondary teacher is necessarily a higher being with nobler instincts and loftier aims, as well as wider scope and more gracious material.

Primary and Secondary Education connected in Bombay.

In Bombay, however, while we enjoy a continuous educational system, we are also free from the worst effects of *social* caste feeling such as characterize and impede English education. Hence it is especially necessary, and at the same time quite feasible, that principles and methods which have been applied to the lower part of that system should find their natural continuation or counterpart in the higher. Trained teachers in the Secondary Schools are needed to cultivate the seed sown by their trained elementary colleagues, and to produce the best fruit it is essential that the methods of both should harmonize and that each class should understand the principles by which the other is guided, and should sympathize with its aims. Clearly then there can be no radical distinction in essentials as to their training, no irreconciliable difference between the conceptions of their scope and duties.

Hence continuity in Secondary and Primary Training essential.

Details as to the manner in which secondary training might be applied in Bombay I reserve for a special report on the subject, and content myself with indicating here the progress made in such work in Great Britain.

Secondary Training in England not Departmental.

Neither in England nor Scotland has secondary training as such been directly organized by the Educational Department.† The duty has been undertaken directly by special bodies and indirectly by the Universities. These two agencies, however, work in connection with each other. Thus the Maria Grey College for women prepares its pupils for the Cambridge University Diploma and the London County Council College will work up to the Diploma of the London University. As a rule the Universities do not immediately undertake the work, but prefer to provide in their degree courses, or by a special diploma, or by both media, a goal which may stimulate and guide the study of candidates, the particular work of preparing whom falls to specially constituted authorities.

Secondary Training, ideally should be post-graduate.

Ideally, it is undoubtedly better that such preparation, if it is to be of the highest kind, should be undertaken after, and not during study for a degree. Thus we find that in the London County Council Day College the secondary course is to be post-graduate. Under the Order in Council *re* Registration, a secondary teacher in order to be registered must have undergone a training course for at least one year. The curriculum for the London University's Diploma provides ordinarily for a course extending over one Academic year. Hence a graduate of that University joining the London County Council College's secondary branch could obtain his diploma and qualification for registration in a year after taking his degree. The theoretic work taken by such a student would be as follows:— (1) The Scientific Principles of Education, (2) Practical Development of those principles, (3) History of Education, (4) Practical Training. Under the first come psychology, logic and 'ethics' (*i.e.*, 'educational ends,' relation of individual to community, conduct and character). The second includes general and special methods of teaching, school administration and organization, cultivation of attention and interest, assimilation of knowledge, the order of acquiring knowledge, educational values and co-ordination of studies. The third deals with the evolution of educational ideals, and includes the study of the writings of great teachers and of home and foreign school systems. Under the last are observation of teaching, prepara-

London post-graduate course.

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* In 1901 only three boys per 1,000 inhabitants in London were in Secondary Schools as against 10 per 1,000 in Berlin. Only about 2,000 pupils, in all, in London were getting even a *Higher Primary* education.

† The English 'Order in Council' of 6th March 1902 dealing with the Registration of Teachers, recognize secondary training as a condition of registration as a secondary teacher, but does not enforce registration. It also explicitly recognizes the diplomas and training courses of various Universities and Institutions.

tion of notes of lessons, criticism and demonstration lessons, giving lessons under supervision, and reports on progress, physical and mental, of individual children.

Edinburgh's Diploma of education.

The 'School-master's Diploma' of Edinburgh University, though based upon graduation, is somewhat different in its character. Candidates must be graduates of a Scottish, English or Irish University, must have attended the class of the Theory, Art History of Education in the (Edinburgh) University * and have gone through a course of practical training in a college for Teachers, of at least five months. Each candidate is required to satisfy the examiners of his practical aptitude as a teacher by teaching a class. The examination also includes a short thesis (or essay) on an educational subject. The Diploma falls into two grades—(*a*) a *general* diploma for those who have taken the ordinary degree, qualifying for employment in "public schools" (*i. e.*, schools open to inspection and in receipt of aid from Government) generally, (*b*) a *secondary* school diploma for graduates in honours. Edinburgh also permits 'education' to be taken as a subject for the degree. The details required for the Diploma are the same as those of the Graduation subject,† but "the standard of pass is much higher," and, in addition, certain texts are prescribed. At Glasgow the regulations are practically the same, the diploma being of two kinds—(*a*) general, (*b*) with distinction. The latter is granted to a candidate who, in addition to fulfilling the requirements for the general diploma, passes an examination on method in one or more of the following as taught in secondary schools:—Classics, Mathematics, Science, English (including History), French and German. He must, however, also be an 'honours' man. At Aberdeen the diploma is of one grade only: the examination falls into two parts of which the second cannot be taken until a year has been spent in teaching.

Education as a subject for the degree.

Diplomas at other Scotch Universities.

The Manchester Diploma.

At Manchester the subjects prescribed are those generally in vogue, but the Diploma courses are not identical with those for the degree subject of 'education.' In preparation for the diploma a course of one year's study is required: such a course should include not less than thirty lectures on the Theory, Practice and History of Education in an approved college. Besides a written examination, candidates are tested by reports from the Professor of Education as to their teaching during training, by submission of written records of school work kept by the candidates and by teaching before the examiners. Provisions are also made for Demonstration and Criticism Lessons.‡ The course is a post-graduate one. The diploma has but one grade, but a clause enables candidates to offer special subjects in addition to the ordinary and to be examined practically and theoretically in the method of teaching these. Certificates of having passed satisfactorily through courses of instruction for this purpose are required.

Secondary training at Oxford.

At Oxford the University, after providing a special diploma,§ and an examination for the same, has left it to the Delegates of Local Examinations to "make arrangements for satisfying themselves of the efficiency of a candidate as a teacher." Thus the Delegates certify that (1) the candidate has satisfied the authority appointed by them in practical work done under supervision in Oxford, (2) presents a satisfactory record in writing of lessons prepared and given during training, (3) has taken a further probationary course of teaching in an approved school. This last involves giving 100 lessons and a good report from the head of the school. The subjects required are the usual ones, but one special subject is also demanded (*e.g.*, the method of teaching in a secondary school a classical language and history, or modern languages, or English Literature, or Natural Science, etc., or the Educational theories of a given period, or School Hygiene, or Educational Administration, or the Herbartian doctrines of 'interest' and 'concentration'). The training is undertaken by specially appointed tutors who give lectures and demonstration lessons and supervise the practical work. Tutorial assistance and individual guidance are, indeed, special features in the

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* Edinburgh maintains a Professor of Education, who lectures on the subject. One of the chief Pioneers in secondary training was Professor Lawrie, who has just retired.

† *Viz.*:—(1) Theory and Art of Education including some Ethics and Psychology, (2) History.

‡ One-hundred such are required.

§ Oxford does not allow 'education' as a subject for a degree.

Oxford scheme, which cultivates inclination for 'original work' and fosters independence of judgment. The course is, however, rather short (two Academic terms' theory *plus* practice) and for members of the University is * *not* necessarily post-graduate, though members of other Universities are required to have qualified for a degree in their own University. Women are admitted under special conditions framed to suit the circumstances of Higher Female Education.

Secondary training at Cambridge.

The corresponding institution at Cambridge forms the Secondary Department of the Day Training College and is directed by Mr. Oscar Browning with Mr. Fletcher, the tutor of the primary branch, as master of method. Its constitution entails more interchange of ideas and experience between primary and secondary students than most other institutions, and (as at Oxford) the staff relies largely on tutorial methods and individual guidance. The course is for a year, but is not post-graduate, students being required only to have matriculated and passed the Previous Examination. The other regulations call for no special remark. The curriculum is governed by the subjects set for the Cambridge University Diploma and runs on the usual lines.

Special Secondary Training Colleges for Women.

Women may take advantage of the above training in most cases, but a large number of higher secondary female teachers come from the special residential secondary training colleges for women, of which the chief are "The Maria Gray" College (London), St. Mary's, Paddington, The Cambridge Female Secondary College, The Ladies' College, Cheltenham, St. George's, Edinburgh, and the "Froebel College," Kensington. The last will be dealt with in connection with kindergarten. The conditions of admission vary considerably, but all exact a sound secondary education and some academic qualification or its equivalent. They prepare their students for such diplomas as those of Oxford, Cambridge, London and Edinburgh. Some have secondary schools attached to them and some also maintain a kindergarten branch and school. The staffs are exceptionally highly qualified and very competent, and in several cases the instruction is given in fine and well-equipped buildings. The general conditions are thus very favourable for the production of good results.

"King's Students" in Scotland.

A brief reference may also be made to one other system of training, the institution of "King's Students" in Scotland † who, under the authority of a local committee ‡ responsible for their discipline and moral supervision, regular attendance at lectures and practical training, may attend a University or University College. The Department fixes the number of such students to be recognized by each committee. The committees are entitled to propose for recognition candidates not less than 18 years of age, who have passed the "preliminary" of a Scottish University or the higher grade at the Leaving Certificate. The candidates must also be satisfactorily reported on for skill in teaching and for needlework (if girls). The nature of the training may be secondary or primary, but in either case is governed by the examinations for primary or secondary training described above. Grants are made by the Department to Local Committees to provide (in part) for instruction and training and for maintenance allowances to the students.

C.—Kindergarten.

Kindergarten, various views of.

The necessity of "Kindergarten" now appears to need no demonstration to the educationalist, yet in actual practice the denotation of the term varies, while its connotation is often extremely vague. Many phases of education claim the title, but not all on the same grounds or with the same justification. Speaking generally one may classify such phases as follows:—(*a*) those based upon the view that Kindergarten supplies a complete system of education for childhood and youth, (*b*) those that recognize it as limited in scope to infancy and early childhood, (*c*) those that emphasize particular elements and tend to limit the name to these to the exclusion of others which are termed "ordinary" subjects of education, and are treated on different lines.

Kindergarten an organic system of education.

Without entering into argument as to the validity of these varying views, one may say that "Kindergarten" represents rather certain fundamental

* Section 1—Conditions of admissions.

† Scotch Code, section 83 (*b*) and sec. 96.

‡ Committees exist at Aberdeen, Dundee and St. Andrews.

conceptions of the nature and aims of education as a whole than a series of ingenious and special methods of dealing with certain subjects at certain stages of childhood. From these fundamental principles springs a general method, the particular adaptations of which are logically connected with each other and with the system of education in its entirety. Hence, while it does not follow that the games and songs of infancy are to be prolonged until youth, it should follow that the methods on which the youth is taught and the educational aims of his teachers should not be incompatible with or wholly dissevered from those of the earlier stages. Thus those schemes which involve a complete break between the education of the "infant" (or young child) and that of older children, or which select certain isolated "subjects" for treatment by "Kindergarten methods" and ignore the organic relation of the various elements in education to each other, are often little better than travesties of the ideal Kindergarten system.

Breach in British schools between early and later schemes of education.

Taking primary schools in Great Britain as a whole, it must be admitted that in many there is not a courageous attempt to co-ordinate the methods of instruction throughout the various departments of the school. Thus methods which have been initiated and successfully carried through in the 'Infants' Department' are gradually (sometimes, abruptly) abandoned in the upper school. Or, conversely, methods are attempted in the upper classes which prove unfruitful because the necessary training, which their counterparts should have supplied in the lower, is lacking.

The same criticism is true in a still higher degree of the secondary boys' schools of England, in not a few of the most famous of which method and co-ordination have long been conspicuous by their absence. On the other hand, in a few such and in more girls' schools the attempt has been made and not without success.

Practical difficulties.

It must be granted that in ordinary circumstances there are many practical difficulties impeding the fulfilment of the ideal. In especial the vast masses of pupils to be dealt with in the primary schools and the consequent size of the classes have rendered nugatory the effort to apply Kindergarten principles in their full force and to a thoroughly satisfactory extent. Infants' classes of 50 or 60 (such as may not infrequently be seen) are far too numerous for such a purpose When (as also is still far too common) such are left largely, if not wholly, to the care of pupil-teachers or to teachers with no special Kindergarten qualification the effort is foredoomed to failure.

British Infants' Schools.

Nevertheless in the Infants' Departments of many urban schools considerable progress has been made. Such departments practically form separate schools, though they may be, and usually are, in local connection with the upper schools. They are often housed in specially constructed buildings, in which the rooms, furniture and general arrangements are directly designed for the use of infants. At the head (under the general supervision perhaps of the head master of the upper school) is a mistress with genuine qualifications and under her are a number of teachers more or less appropriately qualified. It is now admitted on all hands that for infants and young children, women make the best instructors, especially if they have had Kindergarten training. In not a few boys' schools, even, the junior classes of the upper school are entrusted to female teachers.

The Infants' Department in a Scottish primary school.

All urban schools of this kind in Scotland will be divided into three divisions, the lowest of which is intended for beginners aged about 5, the highest for children about 7 years old. Each division may be sub-divided into classes as required. Promotion in one subject from class to class is not made necessarily dependent upon proficiency in another.* Above the Infant Department comes the "Junior Division" for children between 7 and 10 years of age, after which the "Senior Division" is provided for those between 11 and 12. Thus a transition stage is secured (in theory at least) between the infants and the eldest division. In practice the methods of "the Junior" may be those of the "Senior Division" and a breach be thus entailed between the upper and infant schools, especially if the teachers in "the Junior" are exclusively men.

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* Scotch Code (1903) Sec. 19.

In England children are taken as young as 3 years old, a practice which necessitates a larger number of sub-divisions, and greatly increases the difficulties of teachers. For "the babies" many Boards provide toys and picture books, though these are not infrequently the outcome of concerts or exhibitions got up by the staff, the proceeds being devoted to the purchase of such "necessary equipment", as these things may now be considered. In most cases such articles are employed in "Kindergarten games," though occasionally a hard-pushed teacher is reduced to using them to keep an especially obstreperous infant quiet. Babies in English primary schools.

In small country schools, too, something has been done, though the amount has usually depended upon the idiosyncrasies of local managers. The infants are given a separate room (or two in some cases) divided in the newer buildings by partitions of wood and glass from the main school and thus kept under the head's supervision. There is also, when possible, a separate teacher for them with some special qualification. Country schools, provision for infants.

I append a copy of a detailed scheme in use in a Glasgow school, kindly presented me by the head teacher. The school was one of the best I have seen and the scheme will amply repay study. In regard to its execution the following points should be noted :— Kindergarten practice in a Glasgow Primary School.

(1) The different subjects were carefully correlated, but correlation was not pushed to excess. Thus in the 'Story lessons' a theme, such as "The Honeysuckle climbing the Oak," was selected, and after the teacher had told it, the children reproduced it, not only in their own words, but in simple models worked in clay ; each child striving to express *his own* conception of the story in his model. "Number" again was dealt with *incidentally* through the media of games, stories and pictures, such apparatus as the "jointed lath" and the "ball-frame" being used freely, but not as an end in themselves in such lessons.

(2) The nature lessons, games and action songs were connected, the games and songs being based on nature "motifs," and the subjects being selected to suit the current season. The object lessons, however, were not limited to nature studies solely.

(3) In reading the "look and say" method was combined with the phonic: word-building was treated as a useful exercise within limits and as a valuable adjunct to other methods. In "writing" children did the small print letters as well as those of the written script, this as an aid to reading.

(4) The conventional "Froebel Gifts" (cube boxes, etc.) are comparatively little in evidence and most of the apparatus required for "occupations" could be made without difficulty (or procured) locally in our own Presidency.

(5) The drawing and brush work were exceptionally good and would have done credit to far older pupils. Most of the teachers were particularly competent in their subjects and one had produced many of the excellent sketches and pictures with which the rooms were decorated, and which were intended, in most cases, to serve specific purposes in illustrating games, nature study, number lessons, etc. In the brush work much was made of the 'blob'—probably too much—but in the higher infant classes very good work was done in mass colouring and with brush lines. Particular attention was paid to memory work and to original work in which simple adaptation of natural forms to design was attempted. The chalk work included "free sketching," *viz.*, a child was allowed to reproduce, in his own way, scenes or incidents or objects from current daily life within or without school. The earlier pencil drawing included "measured ruler drawing" with squared and plain paper. This is considered by many authorities an excellent corrective to the vagueness and possible inaccuracy of detail, which excessive attention to mere brushwork tends to produce. The lessons with the pencil and brush we e brought into combination with nature study (*e. g.*, to represent the development of particular seeds or plants, of which valuable illustrated records were thus acquired by the pupils) with other form and colour lessons and with stories and recitations.

Kindergarten practice in other British primary schools.

In South Wales, also, there are some good Infants' schools. Particular mention may be made of one inspected at Barry. Here the building and equipment were especially good, the Barry Board being one of the most progressive, educationally, in the country. I noted that the infants' object lessons, though largely based on nature study, included objects from home life. They were arranged with reference to the seasons and co-ordinated with drawing, brushwork and clay-modelling. The nature lesson, as a rule, gave the motif to each chain of co-ordination. The drawing and brushwork included conventional outline patterns (to give accuracy and dexterity), subjects drawn directly from the nature study, illustrations of games, stories, poems, etc., original work and free sketching. Here, too, the games and songs were correlated with nature lessons and with the subjects chosen for reading and writing. At Cardiff I found the same methods and was much struck with a "squirrel" game * that I saw there. The season was autumn: hence the choice of the subject, in which were described the habits, haunts and food of the squirrel. Number, form, and the letters were taught *incidentally* to the youngest children. I noticed that special use was made of *cowries* in the number lessons. The bigger children in the Infants' school were taken short walks by the teachers in connection with their object and nature lessons. A record of things observed was made by the teacher and kept for use in class. Here, as in many other schools, plants, tadpoles, seeds, etc., were kept and cultivated in the class-rooms, as material for or adjuncts to object lessons. Practically the same procedure was adopted in a very good school inspected in Bristol. In this school I noticed particularly that the children in the upper infants' classes read not only from their own class books,† but at sight, from books not in regular use, and that they were expected to explain properly the general sense of what they read. In recitation use was made of gesture and dramatic action, but not always with success, the West of England child being of a somewhat stolid and undramatic nature, very different from the Londoner. At another excellent school at Manchester (Moss-side) I found the same power of sight reading together with the same procedure in regard to the general work. This combination deserves notice, because it is often said that "Kindergarten methods affect, for the worse, the teaching and learning of of the 3 R's." This belief has gained a hold in some quarters in Scotland, but I have yet to find sufficient evidence in support of it. Other features, specially noted at Moss-side were the excellent supply of models, casts, etc., for use in object lessons, the clay-modelling (in which memory work and original design were attempted in addition to the ordinary reproduction of simple material forms) the excursions (to fields and parks), the fine wall pictures, the "conversation lessons" with the children (based upon fairy or nature stories told to the class, and repeated in their own words by the children and discussed with the teacher), the special time-table and intervals for the "baby class." At Clyde St. School (Greenwich) under the London Board, I found a somewhat similar programme‡ but less effectively carried out, the classes being too large, the accommodation inferior, and the pupil teacher too much in evidence.

Correlation in English Country schools.

Country schools of the better kind are also now awake to the necessity of correlation and the desirability of drawing, clay-modelling, etc. I quote instances of correlation, based on nature study, or on object lessons, observed in country schools in Gloucestershire, Monmouthshire and Oxford.

(*a*) Story.	Object Lesson.	Clay-Modelling.
"The Baby Buds' Winter Clothes."	Autumn.	Acorn (or plum, or pear).

Drawing.	Sticklaying.	Writing and Word-building.	Number.
Leaves.	The *ladder* of the man who picks the pears off the tree.	The names of the trees in the story.	Chestnuts, nuts acorns, etc. (for counting, etc.)

(*b*) Story.	Object Lesson.	Game.
Larks in the Cornfield.	Wheat.	The Peasant or the Miller.

Modelling and Drawing.	Reading.	Writing.
A wheat ear.	Sentences from the game or story.	Words from the story.

* Including dramatic action and singing.
† More than one are in use in the same class.
‡ Omitting the special features of Moss-side.

(*c*) Object Lesson.	Drawing.	Clay Modelling.	Writing.
Autumn or a pear, or apple, or corn.	Apples or pears, or ear of corn.	Apples or pears, or sickle or loaf.	Name of either fruit, or the words "corn" and "flour," etc.

Paper-folding.
A box to hold fruit or a flour bin.

(*d*) Story.	Action-song.	Object Lesson.
"Goody Twoshoes."	"The Industrious Cobbler."	The Cobbler (his tools, leather, boot, etc.)

Drawing.	Clay Modelling.
A shoe (with pencil in outline in square ruled books).	A shoe.

Work of this kind is certainly not beyond our own elementary teachers, whether Vernacular or European. Its efficiency, however, entirely depends on (1) the degree of training possessed by the teacher, (2) the spirit in which it is done. Mere mechanical repetition of borrowed schemes and alien devices will do little good. Our teachers must be able to enter into the true spirit of the system and to work out means and ways of their own. Adaptation and modification of European methods will go part of the way, but not all, and must be supplemented by original work, for which, however, guidance and training are requisite. Application of Kindergarten Methods in Bombay.

This can be supplied in the Training Colleges, provided (1) that the staffs are competent to train in Kindergarten methods, (2) that a suitable infant school for practice is attached to the College, (3) that the Principal is allowed to arrange the curriculum of this school in the way most appropriate for the purpose, (4) that sufficient time (apart from general work) is given to this training. The practising school will serve both as a model school and as a field for experiment and the College should in the same way become an institute of research in which the staff are interested not only in teaching on old and approved lines, but in working out for themselves and testing new developments and local variations. It is, I think, better that the work should be done in the ordinary colleges, if possible, as thus it is kept in touch with the rest of our teachers' educational training. In good hands the two will act and react for good on each other, breaches in continuity of method will be avoided, and misunderstandings and one-sidedness prevented. The field, is, of course, one peculiarly appropriate for Women's Colleges and special and prior attention may be expected to it in them. Yet, having in view the paucity of trained female teachers in the Presidency, the need of employing men even in schools exclusively for girls, and the superior capacity (as compared with the average male European) of the native master in handling very young children, I do not recommend that instruction and practice in Kindergarten methods should be confined to female teachers. Provision for the same should be made as far as possible in male colleges. When colleges for women and men exist in the same town, arrangements should be made for combined theoretical work under proper supervision, and in practice the special school attached to the female college might be used by the men if necessary. In this way a saving of time, labour and personnel would be secured. Suggestions *re* Kindergarten Training in the Presidency

An interesting and suggestive exposition of the spirit in which this training should be carried out both by student and trainer will be found in a little book, "The Work of a Kindergarten Teacher, or letters to a Student in Training," by J. Errington, a perusal of which (not, of course, to the exclusion of larger and more detailed works) would profit most of the students and teachers in our Training Colleges. Two other works from which useful suggestions may be gathered are "In the Child World," by E. Poulsson, and "A Natural Programme and its Connections," by Jeanie Mackenzie. Special mention may also be made of a valuable report furnished by Mr. J. Struthers, H.M.I. (Scotland), in 1895, on Sloyd and Kindergarten occupations in the elementary school. Some Kindergarten literature.

Turning to secondary schools I may instance one case of an attempt to co-ordinate methods throughout the entire course of an ordinary school, *viz.*, the Harris Academy, Dundee.* In this institution children may be educated from Kindergarten Methods in Secondary Schools.

* For boys and girls.

the infant stage up to the University. In the infants' department, instruction begins with lessons on 'form,' 'early impressions,'* 'plants,' animals,' 'the body,' common objects, natural phenomena. These lessons are supported by drawing (pencil and free arm on black-board) brushwork and 'industrial work' (*e.g.*, needle-drill, knitting, hemming) as well as by the ordinary subjects. Such instruction is continued in a graduated and progressive scheme throughout the school career. In the Aberdeen Girls' High School more was made, perhaps, of the occupations in the Infants' Department. These included 'rolled brass foil work,' 'sprinkling work' string and basket work, embroidery with beads or coloured threads, paper plaiting, 'macrame work,' 'quill work,' winding tinsel thread on paper shapes, knitting and the first three 'Froebel gifts.' They were utilized not as mere amusements, but as indirect lessons in form, design, colour, etc. This 'manual' training was continued and developed in the upper departments, chiefly in clay modelling, drawing, chalk and brushwork and painting. Similar schemes are in course of adoption in the better English Girls' High Schools.

Froebel Kindergarten School.

The school in which one of the best instances in Great Britain of co-ordination of method and correlation of subjects can be seen, is that attached to the Froebel Institute, Kensington. It is, however, specially circumstanced and its curriculum must be regarded as typical rather of what may be than of what is. That the lines, however, of such an institution are capable of reproduction in India is proved by Miss Edge's school and training class in Bombay, which are conducted on the same principles. Correlation is made to depend upon 'concentration' of a practical and fruitful kind, but forced and far-fetched connections are discouraged. In the lowest department nature study forms the basis of concentration, while in the 'transition' stage the work may centre round a history lesson or a story. In any case the various class schemes are so co-ordinated as to form a progressive series on each subject throughout the school and so that development in one branch may aid development in another. In particular care is taken to avoid the special danger of concentration, *viz.*, the conjunction of spasmodic and disconnected bits of learning in series punctuated by huge and arbitrary gaps. The school is divided into (1) the Kindergarten (proper),† (2) the transition, (3) the (upper) school. In the first special effort is directed to fostering sound *moral* and *social* dispositions (*as well as* to cultivating the intelligence and the hands and eyes) through the media of the occupations. The transition forms the link between the other two departments and is intended for children between 6 and 8 years of age. The first and second serve as necessary preparation for the third stage, in which the spirit of the previous training is applied to more advanced subjects such as those taken in an ordinary public school.

The following is an outline of the instruction in the 'Kindergarten' and 'Transition':—

Curriculum in the Froebel Institute School.

I.—In the Kindergarten—

- Nature Study (including the care of Animals and Plants).
- Stories and Simple Talks.
- Kindergarten Games and Singing.
- Kindergarten Gifts and Occupations (including Clay and Sand Modelling, Drawing, Painting, and other handwork).

II.—In the Transition—

- Nature Study.
- Stories as an Introduction to Literature, History and Geography.
- Kindergarten Games, Singing and Drill.
- Reading, Writing and Lessons in Number and Form.
- Modelling, Drawing, Painting and other handwork.

Kindergarten Training at the Froebel Institute.

The school is attached to an institute for the training of teachers. What such training means may be best seen from the following extract derived from the prospectus and from the scheme of a daughter institution at Blackheath, of

* *i. e.* Sense impressions.

† For children between 3 and 6.

which a copy is forwarded. For the elementary certificate a sound general education is required of candidates (*e. g.*, the Oxford and Cambridge local examinations certificates are accepted as qualifications). For the 'senior divison' higher qualifications are demanded (*e. g.*, the London Matriculation). Division A of the senior course prepares for the higher certificate of the National Froebel Union; Divison B for the Cambridge Diploma. Candidates for admission have to be over 17 for the Junior Division, over 18 for 'Senior' A and over 19 for 'Senior' B.

PLAN OF THE COURSE OF STUDY.

The Froebel Institute courses of Kindergarten Training.

The Courses of the Junior and Senior Division A are separate and complete in themselves; but students are advised to pass one year in the Junior Division and then one or two years in the Senior Division A. In addition to the training given in the teaching of general school subjects, the Senior Course seeks to deepen and extend the knowledge already gained, and to considerably advance the practical skill of the Teacher.

The Course in the Senior Division B requires three terms' Training.

JUNIOR DIVISION.

(*a*) Knowledge of Child Nature, including practical observation of Children, and the elementary Laws of Psychology.

(*b*) Nature knowledge, *i.e.* the Elements of Botany, Zoology, Physics, and their practical application in the Kindergarten.

(*c*) Kindergarten Gifts and Occupations; Games and Stories.

(*d*) Class Teaching including Criticism Lessons and the sketching and discussion of notes and Methods of giving Lessons.

(*e*) Theory of Music and Singing.

(*f*) Blackboard Drawing and Brushwork.

(*g*) Physical Exercises and simple Laws of Health.

(*k*) The general principles and methods of Pestalozzi and Froebel.

(*i*) Simple Practical Geometry.

SENIOR DIVISION A.

The Froebel Institute courses of Kindergarten Training.

(*a*) Froebel's Principles, as they are set forth in the *Education of man* and the *Mutter and Koselieder*.

(*b*) Theory of Education and the Psychological Basis of Teaching.

(*c*) History of Education, including:—

The educational work of Pestalozzi and Froebel.

The principles and methods of Comenius, Locke, Rousseau, and Herbart.

The history of infant education in England.

(*d*) Nature knowledge, *i.e.* Botany, Zoology, and Physics (advanced courses), and their practical application in the Kindergarten and School.

(*e*) Kindergarten Gifts and Occupations, Games and Stories; the method of teaching School subjects (*viz.*, Reading, Writing, Arithmetic, History, Geography, etc.)

(*f*) Blackboard Drawing and Brushwork.

(*g*) Class Teaching, including Criticism Lessons and the sketching and discussion of notes and Methods of giving Lessons.

(*h*) Physical Exercises, Physiology and Hygiene.

(*i*) Theory of Music and Singing.

(*k*) Practical Geometry.

SENIOR DIVISION B.

(*a*) Theory of Education, and the Psychological Basis of Teaching.

(*b*) History of Education, including a general knowledge of the systems of Education in Europe since the Revival of Learning, and a more detailed knowledge of special subjects selected from year to year.

(*The Special Subjects for 1903 will be the Life and Works of Pestalozzi and Lock's Thoughts on Education.*)

(*c*) The Practice of Education, consisting of (1) the Method of Teaching School Subjects, the order and correlation of Studies, *etc.*, (2) School Management, including Hygiene, with special reference to the material arrangements of the School and the conditions of healthy study; the structure, furniture, and fitting of Schoolrooms, books, apparatus, *etc.*

(*d*) Class Teaching, including Criticism Lessons, and the sketching and discussion of notes and Methods of giving Lessons.

(*e*) Blackboard Drawing.

(*f*) Physical Exercises.

(*g*) Theory of Music and Singing.

(*The Students in this Division may attend other Lectures if they have sufficient time.*)

Note.—The following points of detail are worth recording for guidance.

Kindergarten: some points of detail.

1. *Drawing and Brushwork.* Measured pencil work (*i. e.* with a measure or on square ruled paper or both) is desirable in the earlier stages, in company with free arm and brushwork. It is of special value as demanding and securing accuracy and is a useful preparation for freehand and for scale and geometrical drawing. (Mr. Elliott, H. M. I., Bristol.) *Brushwork* must be distinguished from *blob* work. The latter consists in producing coloured impressions by laying a paint brush on paper after dipping it in water-colour.* There is practically no manipulation of the brush and little use is made of its point. Such impressions may be combined to form various patterns and designs, and as such are of some value. Otherwise blob work is mechanical and leads to nothing. It is being discontinued in the best schools,† except for mere beginners, and its place is taken by mass colouring, in which the effects are produced by a few broad, firm touches or sweeps of the brush. For 'free arm work' in chalks mural boards are the best. I saw one at Gordon College, Aberdeen, round a large class room, composed of sheets of cartridge paper glued to the smooth wall surface and fitted with wooden borders top and bottom. The paper was painted gray. Price of whole 5/8d.

Useful hints and illustrations on various forms of drawing and brushwork are contained in the English Education Department's "Illustrations and Notes on Primary Drawing" (1901—Eyre and Spottiswoode, 32, Abingdon Street, Westminster).

2. *Clay Modelling*—Simple natural forms and easy articles in common use should be used as examples. In higher classes the 'building up' method is advisable. Modelling clay, plasticene and 'terra-cotta plastic clay' (Philips and Son, Liverpool) are all in use.

3. *Furniture*—'Galleries' are almost out of use—low, flat, dual tables with backed seats and wide intervals between the rows are preferable. In some Scotch schools sloped floors are used, but they are not generally recommended. Slates are retained in Scotland, but are being discarded in England. For hints as to apparatus and equipment for occupations, etc., the catalogue of a good publishing firm (*e.g.*, Charles and Dible, London and Glasgow) may be profitably consulted.

4. *Hours of work for Infants.*—Usually 4½ to 5 per diem.)

D.—Object Lessons.

General Principles.

'Object Lessons' should include and be based upon 'nature study,' but are not to be confused with or limited to it. They should form a preparation for the teaching of elementary science and the methods employed should be directed to the cultivation of a habit of scientific enquiry and of a capacity for understanding the general principles of scientific procedure. For this purpose it is

* I found coloured inks used in one school: they are very cheap.
† cf Dr. Stewart's remarks in his report.

essential that the teacher should work *with* rather than *for* his pupils, that, so far as is possible, the latter should conduct simple investigations for themselves and record and verify their own results. In any event the mere "pouring in of information" is to be avoided. Hence object *lessons* should rather be designated "object *studies*" * and the teacher be considered not an imparter of useful knowledge but a guide on the path of discovery.

Dr. Armstrong's Heuristic Method.

The methods on which it is desirable to proceed are set out by Dr. Armstrong briefly and clearly in the notes appended to the English specimen courses. He deals there more particularly with general object studies, with weighing, properties of water and simple chemical changes. A fuller treatment of the subject, with useful appendices dealing with physics, chemistry and botany, will be found in Dr. Armstrong's paper on "The Heuristic Method of Teaching" in the English Department's series of special educational reports.

General Features of Heuristic Method.

The chief features of the method may be thus briefly summed up—

(1) Personal investigation and experiments, accompanied by written record.

(2) The use of quantitive comparisons and analyses by means of measurement and weighing, and the construction of calculations on the data thus obtained.

(3) The construction of a suitable synthesis of "lessons" both as regards a particular course and the general scheme. Courses should not consist of a number of isolated lessons or more or less disconnected subjects, but should be arranged with a view to a definite line of investigation and the acquisition in that line of suggestive results, capable of further development. Similarly, the different courses in a complete scheme should be arranged with a view to the harmonious and continuous development of the investigator's powers and knowledge on lines admitting of connection and reacting, each on the other, with reciprocal advantage.

(4) Capability of correlation with other work, *e.g.*, geography, story telling, composition, manual training, drawing, brush work, &c.

(5) The acquisition of the *power* to do a thing as well as the *knowledge* of how to do it.

Value of Heuristic Method.

Whatever may be thought of the details of Dr. Armstrong's suggestions (and not all of them are applicable to our Indian elementary schools), it is plain that his methods are infinitely preferable to the old hap-hazard style in which the teacher sought only to convey more or less useless information about unrelated and often uninteresting things—uninteresting because the facts narrated had often little reference to aught in the experience of the listeners, who had no opportunity of testing and verifying them for themselves, no means of ascertaining on their own account the operation of the forces which such facts might involve.† Moreover the general methods summarized above are in harmony and continuity with the more genuine Kindergarten methods and are capable of still further prosecution when the period for higher studies is reached.‡ Lastly they are peculiarly desirable in Indian education in view of the disinclination of the average native mind for exact and methodical investigation and the concomitant inability to estimate and determine the worth of confused or conflicting data and to appreciate the value of accuracy in results.

Dangers of "Heuristic."

On the other hand Dr. Armstrong's principle of "Heuresis" must not be pushed too far. Common sense should determine what things it is worth while for a child to discover for himself, and what, unless he is to waste his energy and time, it is better that his teacher should tell him. We cannot produce Darwins or Newtons at the age of 7 and it is very necessary not to over-rate

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* *Cf.* Dr. Armstrong's notes appended to the English specimen courses for training colleges.

† *e. g.*, our own lessons on "the printing machine" and "the balloon" in the older vernacular readers.

‡ I saw a very interesting application of independent Heuristic methods developed in science by Dr. Buchanan in an excellent Scotch *Secondary* School, the Gordon College, Aberdeen. In Birmingham similar methods are adopted both for girls and boys in a Higher Grade school.

or over-tax the analytical and synthetical faculties of the average elementary pupil. So also in framing courses and schemes too much may be made of consistency and thoroughness and thereby the cultivation of general capacity be sacrificed to specialism and the over-elaboration of detail.

The Seasons as a basis for object lesson schemes.

Coming to actual practice in ordinary elementary schools I find that our own object lesson scheme does not differ essentially from those at present in force in the better British schools. In some of the latter there is a tendency especially in the junior courses to confine the work almost too exclusively to "nature study" at the expense of other desirable branches. It is moreover customary to regulate the order of the nature lessons by reference to the seasons. This is a practice desirable in itself but not perhaps so specially advantageous in tropical and sub-tropical regions as in Great Britain. There the alternation of the four seasons induces very marked and distinctive natural phenomena, coinciding with their own particular periods. In many parts, however, of the Bombay Presidency the seasons cannot be so precisely tabulated, their periods of duration are unequal and somewhat irregular, and the differentiation in climatic conditions and corresponding natural phenomena in the animal and vegetable worlds is not so definite nor so obvious. Hence, while maintaining the principle of dealing with things in their appropriate seasons, I see no necessity for a hard and fast tabulation of a given number of conventional "Seasons" or for the regulation of the entire course on such a basis.

Other principles in construction of British object lesson schemes.

In a number of schools the basis of classification is by groups much as in the Bombay scheme and the selection of groups is governed by principles similar to our own. In not a few however the old hap-hazard arrangement still persists.

Suggestions for improvement in object lesson work in Presidency.

For the improvement of our own object lesson work what I venture to think is most required is :—

(1) the more careful training of our teachers in heuristic and experimental methods : (2) the cultivation of a more intelligent and genuine interest in them regarding natural phenomena and the fauna and flora of their own districts. Much might be done by the institution of natural history societies and field clubs at the Training and University Colleges and the larger schools : (3) the extension of primary school museums, which should contain not odd assortments of mouldy curios, plus a few relics of obsolete chemical apparatus, but specimens representing the animal, vegetable and mineral types of the neighbourhood, freshly recruited from time to time and serviceably mounted. Simple balances, spirit levels, plumb bobs, examples of the standard weights and measures, lenses and such chemical apparatus of the plainest kind as is sufficient for the performance of the simple experiments indicated by Dr. Armstrong, are also required.*

Magic Lanterns.

To this list may be added the introduction of "magic" lanterns, one of which should at least be in the possession of each Training College. The students should be instructed in its use and in the preparation of slides for object lessons. It would also be desirable for each of the larger municipalities to supply at least one lantern for the use of their schools, where it would very greatly promote the teaching not only of object lessons and elementary science but also of history and geography. It is not possible to supply individual country schools with lanterns, but if one were placed at the disposal of each inspector, he would be able to arrange for its use in the different districts under his control.

School Gardens.

Lastly, as much use as possible should be made of the school garden for the supply of vegetable and floral specimens, the cultivation of particular seeds and plants and the observation of natural phenomena. Careful records of all such work and notes of curious or unusual events or phenomena should be kept by each class according to its special branch of nature study. Such records

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* The above are suggested as additions to the articles mentioned in section 11 of Appendix D to the new "Instructions for Vernacular teachers" issued by the Bombay Educational Department. Section 12 already provides for the nature knowledge specimens.

should have reference also to animal life observed in the garden or neighbourhood (*e.g.*, to appearances and habits of various birds, reptiles, insects, and larger animals) and to climatic conditions (for which a cheap thermometer and a rain gauge will be needed) and their effect upon the garden and its contents.

School Gardens in Towns.

By these means it is hoped that a genuine interest in and some comprehension of the workings of Nature may be obtained by children while yet at an impressionable age. Particular importance attaches to the proper use of the garden and it is to be desired that the distribution of school gardens should be extended not merely in the country but also in the smaller and larger towns. In the centre of the last, gardens must probably always remain a "counsel of perfection," but cannot something be done for the suburban schools? In a fertile soil like that of most of our Presidency, given but water and kindly tendance, the smallest patch of ground will more than recompense the labour spent upon it.

Direct teaching in Agriculture.

It is in this way, rather than in attempts at direct agricultural teaching, that the rural primary schools may best benefit the rural population. In spite of pressure, direct instruction in agriculture has not made much way among British elementary schools, the subject being regarded with dislike in many cases by both parents and teachers. Such work is now being undertaken by the County Councils who despatch experts to lecture and demonstrate in the country villages to general audiences and to teachers, not to mere school children. As regards schools, a compromise has been found more successful, and what is now taught and practised is "Cottage Gardening."* But obviously "cottage gardening" is not "Agriculture." Seeing that cottage gardens, as such, are not a characteristic of the ordinary Indian village and that their introduction would imply something like a revolution in the ideas and customs of the village community, it would seem idle to speculate upon the feasibility or desirability of introducting this particular branch of rural education into our schools. The most practicable course in the matter, given a school garden, is for the teacher to utilize his garden to illustrate, so far as is possible, the habits and cultivation of such rural products as are mentioned in our scheme of object lessons for rural schools, and to do in this connection with his nature work and elementary science rather than as "direct instruction in agriculture."

For the *upper* classes of rural schools † and for higher vernacular schools, such as those I have suggested for intending teachers, a course similar to that suggested in the Scotch Code (1903)‡ for a "supplementary course" in rural schools might be adopted, *viz.*—

Suggested Higher Rural Course.

(1) Nature study continued so as to secure familiarity with—

- (*a*) rocks, soils and plants of districts,
- (*b*) life histories of weeds and insect pests with remedies against them,
- (*c*) wind and insect pollination of plants,
- (*d*) relations of air, water, soil to vegetable and animal life.

Note.—Instruction in the above subjects must throughout be of a practical character. To this end school gardens should be encouraged . . . Advantage should be taken of any agricultural experiment stations in the neighbourhood.

(2) Practical Geometry . . . especially in its application to land measuring and surveying.

(3) The Scotch Code here inserts "study of newspaper markets reports." Such would probably not be available in the mofussil, but the equivalent might be found in similar reports in the Government Gazette and in statistics available at the offices of Mámlatdárs and other district officials.

(4) Keeping of accounts.

(5) *Optional.*—Woodwork, workshop practice from working drawings made by pupils.

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* I saw one successful instance of this in Gloucestershire.

† *i.e.*, schools in rural districts, not merely those under 'rural standards.'

‡ Page 52, Schedule VI.

In any case there should be no breach of continuity in principle or in the general nature of the subjects taught under this head between the work of the highest and that of the lower standards.

(*Note.*—In connection with object lessons and gardening the English Board of Education's "specimen courses in object lessons and gardening" (1902) and the report of Mr. T. G. Rooper, H. M. I., on "School Gardens in Germany" (Special Reports Series) will be found useful for general reference, though naturally many of the details are not applicable to India. More directly serviceable are the "Specimen courses of object lessons on common things connected with rural life and industries for all classes in rural schools," English Board of Education 1901. The remarks in the introduction to the latter touching "what must be avoided" (in which is included "a definite course of instruction in the principles of agriculture or . . . the art of farming") are specially noteworthy. I have by me copies of several schemes of object lessons in actual use in British schools, available for reference, if required.)

J. G. COVERNTON,
Educational Inspector, N. D.,
Bombay Presidency.

12th August 1903.

APPENDIX.

SCHEME OF WORK

OF

DUNARD STREET INFANTS' SCHOOL,

GLASGOW.

SCHEME OF WORK.

Dunard Street Public School. *Infant Department.*

Subject.	Lowest Division.	Middle Division.	Highest Division.
Reading.	(*a*) Letters, their forms and powers, taught by— (1) Stories. (2) Games. (3) K. G. Alphabet. (4) Stick-laying. (5) Drawing. (6) Modelling. (*b*) Words of two and three letters.	(*a*) Reading Book. (*b*) Word-building.	(*a*) Reading Books. (*b*) Word-building.
Writing.	1 Pencil Drill. 2 Simple Course of Drawing—a preparation for writing. 3 Easy elements of small letters.	1 Pencil Drill. 2 Small Letters. 3 Words based on classification of letters.	1 Pencil Drill. 2 Capital Letters. 3 Writing Letters from Dictation. 4 Reproduction of Word-building Exercises. 5 Writing of Name. 6 Copying words from black-board, and reading book.
Number.	Tables 1—5 taught by— (1) Gift III. (2) Stick-laying. (3) Drawing. (4) Jointed Lath. (5) Bead Threading. (6) Number Pictures.	(*a*) Tables 5—10 taught by— (1) Kindergarten Bead Rails. (2) Ball-Frame. (3) Number Pictures. (*b*) Easy Problems.	(*a*) Tables 10—20 taught by— (1) Kindergarten Bead Rails. (2) Ball Frame. (*b*) Easy Problems. (*c*) Easy addition and subtraction sums.
Story and Picture Lessons.	Simple Stories. Conversations on pictures.	Simple Stories. Conversations on pictures.	Simple Stories. Conversations on pictures.
Recitations.	Short interesting Recitations.	Short interesting Recitations.	Short interesting Recitations.
Form and Colour.	(*a*) Gift I. (*b*) Ball-making. (*c*) Stick-laying. (*d*) Embroidery. (*e*) String-laying. (*f*) Bead-laying. (*g*) Drawing circular forms. (*h*) Basket-making. (*i*) Paper-folding. (*j*) Picking out and matching primary colours. (*k*) Rope ravelling.	(*a*) Drawing elliptical and loop forms. (*b*) Paper-modelling. (*c*) Clay-modelling. (*d*) Brush Drawing. (*e*) Picking out and matching primary and secondary colours. (*f*) Ring-laying. (*g*) Floral-tracing.	(*a*) Drawing easy natural forms. (*b*) Clay-modelling. (*c*) Brush Drawing. (*d*) Harmonious arrangement of colours.
Object or Nature Lessons.	(*a*) Familiar Animals. (*b*) Familiar objects of School room. (*c*) Special sense exercises.	(*a*) Lessons on Colour. (*b*) Lessons on Plants. (*c*) Lessons about Animals. (*d*) Lessons on common things. (*e*) Natural Phenomena. (*f*) Lessons about "myself."	(*a*) Lessons on Colour. (*b*) Lessons on Plants. (*c*) Lessons on Insects. (*d*) Lessons on common things. (*e*) Natural Phenomena. (*f*) Animals that fly.

Subject.	Lowest Division.	Middle Division.	Highest Division.
Games and Drill.	(*a*) Simple games with singing. (*b*) Nursery rhymes with actions. (*c*) Simple marching. (*d*) Sweedish drill.	(*a*) Ring drill. (*b*) Musical bells.	(*a*) Dumb-bell drill. (*b*) Scarf drill.
Singing.	Simple action songs.	(*a*) Simple songs with and without actions. (*b*) Note tests sung to hand signs. (*c*) Imitation and modulator exercises.	(*a*) Simple songs with and without actions. (*b*) Note tests. (*c*) Imitation and modulator exercises.
Needlework.	.....	(*a*) Knitting pin drill. (*b*) Needle and thimble drill. (*c*) Knitting. (*d*) Hemming on dotted calico.	(*a*) Knitting. (*b*) Hemming on plain calico. (*c*) Handkerchief or duster.

DUNARD STREET PUBLIC SCHOOL.

LIST OF OBJECT LESSONS FOR INFANT DEPARTMENT.

Highest Division.

A. Lessons on Colour...	1.	Harmonious Arrangement of Colours.
B. Natural Phenomena	2.	A Frosty Day.
	3.	A Snow Storm.
	4.	A Thunder Storm.
C. Lessons on Plants ...	5.	The Uses of Plants.
	6.	The Parts of a Plant.
	7.	How Seeds grow.
	8.	How Seeds are dispersed.
	9.	First Flower of Spring.
	10.	Flowers of the Meadow.
	11.	Flowers of Summer.
	12.	The Fruit.
	13.	Autumn Leaves.
	14.	Autumn Berries.
D. Lessons on Insects	15.	The Bee.
	16.	The Ant.
	17.	The Butterfly.
	18.	The House Fly.
	19.	The Blue-bottle Fly.
	20.	The Daddy Long-legs.
E. Lessons on Sea Animals	21.	The Sponge.
	22.	The Coral.
	23.	The Cockle.
	24.	The Mussel.
	25.	The Oyster.
F. Animals that Fly ...	26.	Birds—Wings instead of arms.
	27.	Birds—Their legs and feet.
	28.	Another chat about Birds.
	29.	A Bird's Nest.
G. Common Objects ...	30.	Glass.
	31.	Water.
	32.	Solids and Liquids.
	33.	Salt and Sugar.

Middle Division.

A. Lessons on Colour ...	1.	Picking out and Matching Primary Colours.
	2.	Do. do. Secondary do.
	3.	Green and Orange.
	4.	Green, Orange and Purple.
B. Lessons on Plants ...	5.	Roots of Plants.
	6.	Leaves and Buds.
	7.	Buds and Flowers.
	8.	Fruit and Seeds.
C. Natural Phenomena	9.	The Sky.
	10.	The Sun.
	11.	Clouds and Rain.
	12.	The Wind.
D. Lessons about "Myself"...	13.	Parts of the Body.
	14.	What the Body is made of.
	15.	The Head.
	16.	Arms and Legs.
	17.	Hands and Feet.
	18.	Eyes and Ears.
	19.	Nose and Mouth.
E. Lessons about Animals	20.	Animals that walk.
	21.	Do. do. fly.
	22.	Do. do. crawl.
	23.	Do. do. swim.
	24.	The Covering of Animals.
	25.	Feeding our Pets.

F. Lessons on Common things.
26. Pen and Holder.
27. A Letter.
28. The Postman.
29. Post Office.
30. A Ship.
31. A Light-house.
32. A Life-boat.
33. A Railway Station.

Lowest Division.

A. Familiar Animals ... ...
1. The Cat.
2. The Dog.
3. The Cat and Dog compared—
(*a*) Paws. (*b*) Tongue. (*c*) Teeth. (*d*) Eyes.
(*e*) Habits.
4. The Horse.
5. The Horse and the Dog compared.
6. The Donkey.
7. The Donkey and Horse compared.
8. The Cow.
9. The Sheep.
10. The Cow and Sheep compared.
11. The Rabbit.
12. The Squirrel.
13. The Rabbit and Squirrel compared.
14. The Mouse.
15. The Rat.
16. The Mouse and Rat compared.

B. The Class-Room ... ...
1. Door and Wall.
2. Window, Floor and Ceiling.
3. Table.
4. Chair and Table.
5. A Book.
6. Slates and Books.
7. Slate Pencils.
8. A Lead Pencil.
9. Black-board and Easel.
10. Chalk and Duster.
11. Waste-paper Basket.
12. Slate-pencil Box.
13. Cupboard.
14. Hand-bell.
15. Clock.

C. Special Lessons to exercise the Senses.
1. Sweet and Salt.
2. Sweet and Sour.
3. Hard and Soft.
4. Rough and Smooth.
5. Long and Short.
6. Broad and Narrow.
7. Thick and Thin.
8. Heavy and Light.
9. Black and White.
10. Red, Yellow, Blue.

DRAWING SCHEME FOR INFANT DEPARTMENT

I.—Lowest Division.

Class VI ... ... A Preparation for Drawing—
(*a*) Straight lines.
(*b*) Simple straight-lined forms } in the concrete.

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Class V ... ... Free Drawing—
(*a*) Straight lines.
(*b*) Straight-lined forms.
(*c*) Circle and forms derived from circle.

Class V ... ... Manual Occupations—
(*a*) Stick-laying.
(*b*) Lacing.
(*c*) Paper-folding.
(*d*) Basket-making.
(*e*) String-laying.

II.—Middle Division.

Class IV ... ... Free Drawing—
(*a*) Simple exercises on the elliptical curve.
(*b*) Memory Work.
(*c*) Original Work.

Manual Occupations—
(*a*) Brush Drawing—Blob, Line, Dot.
(*b*) Clay-modelling.

Class III ... ... Free Drawing—
(*a*) Simple exercises on the Circle and Ellipse.
(*b*) Memory Work.
(*c*) Original Work (patterns, &c., in chalk on brown paper).

Manual Occupations—
(*a*) Brush Drawing—Blob, Line, Dot, Double Blob (and combinations of same).
(*b*) Clay-modelling.

III.—Highest Division.

Class II ... ... Free Drawing—
(*a*) Simple exercises on the Loop curve.
(*b*) Memory Work.
(*c*) Original Work.

Manual Occupations—
(*a*) Paper-modelling.
(*b*) Clay-modelling.

Class I ... ... Free Drawing:—
(*a*) Easy Natural Forms.
(*b*) Simple Object Drawing.
(*c*) Memory Work.
(*d*) Original Work.

Manual Occupations—
(*a*) Brush Drawing—Blob, Line, Dot, Double Blob, Half Blob, Leaf-stroke.
(*b*) Clay-modelling.